A Consolidation of
FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

MARCH 10, 1926

## Make Your Fire Hose a Real Investment

When you buy Fire Hose you make an investment—an investment in efficient, dependable fire protection. Why continue to buy hose on a compromise basis when often if but ten cents a foot were added to the purchase price you could buy the finest hose on the market—hose that will outlast the cheaper hose at least two or three times!

Stop jeopardizing the dependability of your hose equipment by short-sighted purchasing. For over fifty years Paragon and other famous brands of Eureka manufacture have been the recognized standards of fire hose quality and service.

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# The Hardest FIRE I Ever Fought

## No. 12 of a series of experiences of our noted Fire Chiefs

ALEX HENDERSON
Chief
Kansas City, Mo.

We received an alarm at 5:40 P. M., April 4, 1918, for one of the hardest fires in my 51 years of service. I shall call it the West Bottoms fire as it broke out on St. Louis Avenue and Santa Fe Streets in a four story furniture warehouse filled with highly inflammable goods. Eight hours of fierce fighting were required to put it under control, but twenty-four hours elapsed before I felt safe in leaving.

For more than four square blocks there were intermittent fires breaking out due to high wind and flying sparks. Twenty companies in Kansas City, Missouri, were brought into action as well as the Kansas City, Kansas, department. I used six American La France pumpers of 750 gallon capacity, six Seagrave pumpers of 750 gallon capacity, two Ahrens-Fox pumpers of 1000 gallon capacity, one American La France engine, 1000 gallon capacity, one Ahrens-Fox engine, 1000 gallon capacity and one Nott engine, 1000 gallon capacity. I also used seven hook and ladder companies.

No casualties resulted, a rather remarkable fact when I picture in my mind this conflagration which was one of the worst in Kansas City's history. Estimated loss was $2,250,000.

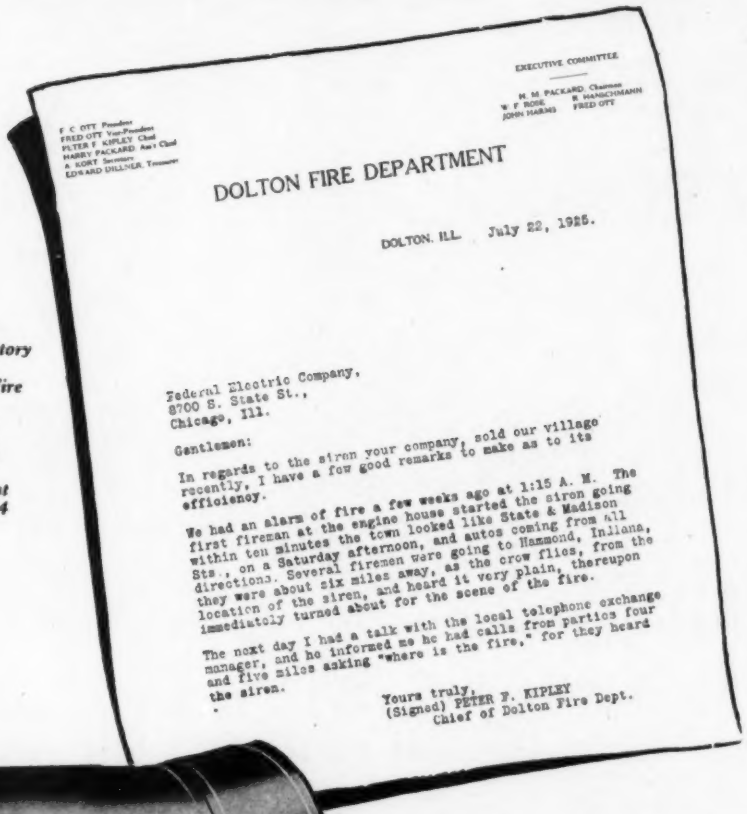
ALEX HENDERSON
Chief

Goodrich Hose was used in bringing this fire under control. For fifty-five years its unvarying superior quality has played a leading part in developing national fire fighting efficiency.

THE B. F. GOODRICH RUBBER COMPANY
ESTABLISHED 1870 *Akron, Ohio*

# Goodrich
## FIRE HOSE *"Best in the Long Run"*

# "Reduces Insurance Rates"



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DOLTON FIRE DEPARTMENT

DOLTON, ILL. July 22, 1925.

Federal Electric Company,
8700 S. State St.,
Chicago, Ill.

Gentlemen:

In regards to the siren your company, sold our village recently, I have a few good remarks to make as to its efficiency.

We had an alarm of fire a few weeks ago at 1:15 A. M. The first fireman at the engine house started the siren going within ten minutes the town looked like State & Madison Sts., on a Saturday afternoon, and autos coming from all directions. Several firemen were going to Hammond, Indiana, they were about six miles away, as the crow flies, from the location of the siren, and heard it very plain, thereupon immediately turned about for the scene of the fire.

The next day I had a talk with the local telephone exchange manager, and he informed me he had calls from parties four and five miles asking "where is the fire," for they heard the siren.

Yours truly,
(Signed) PETER F. KIPLEY
Chief of Dolton Fire Dept.

*Approved by the Underwriters' Laboratory of the National Board of Fire Underwriters*

*Approval dated October 11, 1918*

*Code control patent allowed April, 1924*

*Federal Electric Siren*

**It gets instant attention day or night—always heard—always recognized. Its weird cry gets your men on the job quickly, when seconds count—pays for itself many times in keeping down fire loss and insurance rates.**

*Mail Coupon Now*

FEDERAL ELECTRIC COMPANY, 8700 South State Street, Chicago, Illinois

☐ *Please Send Full Information and Prices* or ☐ *Please Send Representative. We Have.....Fire Boxes*

*Name .....Official Position .....*

*Street and Number.....City..... State.....*

*Our Council Meets.....Our Town Has.....Population*

*Our Current Specification.....Volts.....Cycles.....Phase. Make of Box.....*

FE 3

*The Journal of the Fire Protection Profession Since 1877*

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# FIRE ENGINEERING

*A Consolidation of* FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

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Industrial Fire Protection Expert, Chief of Fire Brigades and Engineer of the Continental Insurance Co., and the "America Fore" Group of Fire Insurance Companies.

## Sprig is Cobbig!

ONLY a little more cold weather — and Spring will be full upon us, and we will be out in the open air again getting the exercise we need to keep fully fit — as suggested by the following story —

¶ Veterinarian: "He's too fat, Madam, that's what's wrong with the dog. He doesn't get enough exercise." Owner: "Oh, but he does. I'm sure he does — he goes out every day with me in the motor."

¶ That dog never could be a fire department mascot!

¶ And speaking of balmy Spring — The American Legion Weekly asks: "Who invented the hole in the doughnut?"

¶ "Oh, some fresh-air fiend, I suppose."

---

¶ Spring means house-cleaning, repairs, new equipment, new apparatus.

¶ Are all of our readers looking ahead and planning to take full advantage of the opportunity Spring affords?

¶ We hope so — we believe so — and we will help you if you give us the chance!

*The Publishers*

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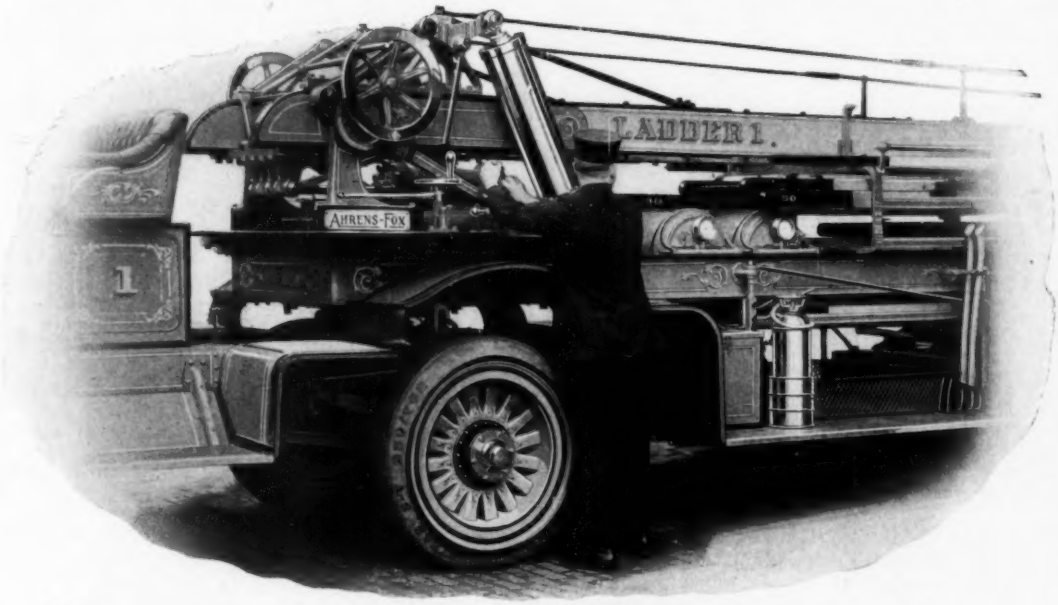
# Ahrens-Fox




## Pneumatic Ladder Hoist

### is Easily Operated and is Rugged and Dependable

The Ahrens-Fox improved Dahill device for raising, lowering, and controlling the aerial ladder is one of the outstanding features that have made Ahrens-Fox Ladder Trucks so favorably known among Fire Officials everywhere.

This Pneumatic Ladder Hoist in its present advanced form has a much reduced over-all height with lower center of gravity. The turntable is of exceptionally rugged construction. All surfaces are accurately machined and the turntable revolves on steel ball bearings.

These are just a few of the many points of merit in the design and construction of the Ahrens-Fox ladder hoist, but there isn't room here to give you more than a slight idea of its advantages, and the superiority of Ahrens-Fox Ladder Trucks.

However, if you will send us your name, position, and address we shall be glad to send you Bulletins with complete information on this improved aerial ladder control, on ladder trucks, and on Ahrens-Fox apparatus in general.

*Send for Fire Apparatus Bulletins*

## The Ahrens-Fox Fire Engine Co.

*"Builders of Quality Fire Apparatus"*

**Cincinnati**

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# *After 2 years service this "DELUGE" pumped its rated capacity --- lifting water 28 feet*

THEY wanted to test this claim of ours: "that a DELUGE Master will not lose its efficiency even over many years of service."

The DELUGE Master Fire Fighter at Franklin, Ohio, had seen two years' service, during which time it had been given some severe fighting duty. On the above test, doing almost the impossible, the Franklin truck drew water from the river 28 feet below and still developed a capacity of more than 400 gallons, its rated capacity.

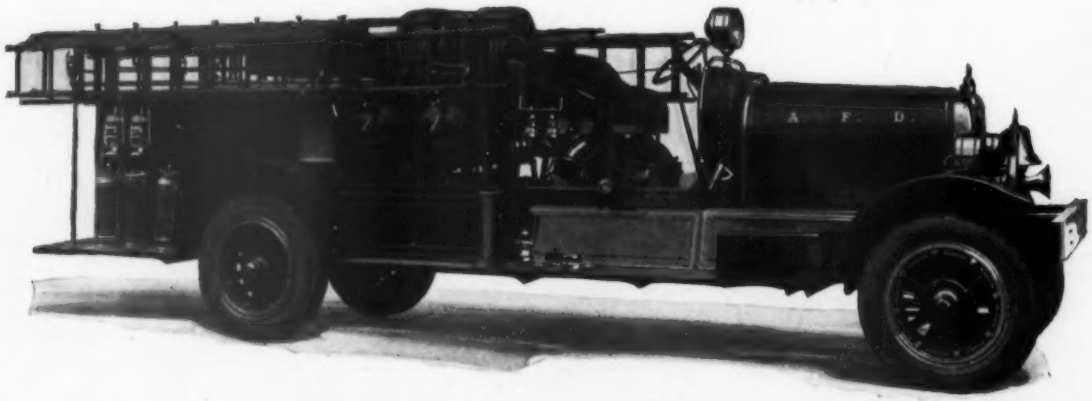
DELUGE Masters are always doing the impossible. They will stand up under the most severe service, or stand idle for months and then, when called, go far beyond the expectations of their owner.

Only a pumping unit such as DELUGE could attempt this test. The Rotary unit, adjustable to all wear; the all-bronze interior, impervious to rust or corrosion; these and many other superior features of construction make DELUGE the chosen pump for fire fighting service. You'll never have dependable, instantaneous service until you have a DELUGE.

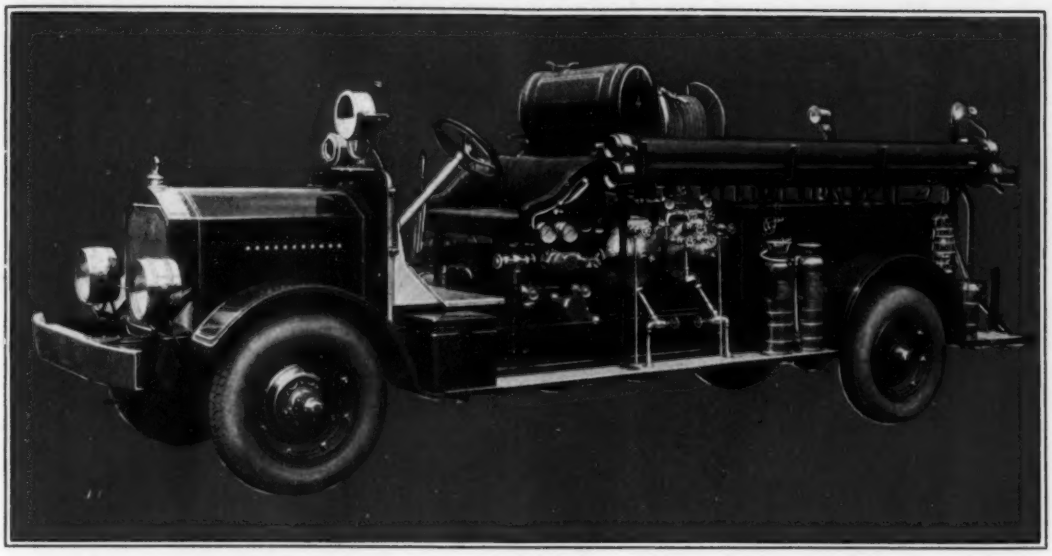
THE PROSPECT FIRE ENGINE CO.

Prospect, Ohio

"FORTIFY FOR FIRE FIGHTING"



# *The "DELUGE" Master Fire Fighter*



*The Childs Heavy Duty "Model 4" Triple Combination Pumper, Chemical Engine and Hose Car recently placed in service at Chateaugay, N. Y.*

# "The fires were controlled before any substantial damage was done"

Thomas J. Fitzpatrick, Clerk of the Village of Chateaugay, N. Y., wrote us recently—

WE have had the start of what might have been three very disastrous fires since the delivery of this truck. The fires in each case were controlled before any substantial damage was done, and our people are unanimously of the opinion that the equipment was worth its cost on each occasion."

*The standard Foamite 2½-gal. Splash-proof Extinguisher*

By reason of this kind of performance, over seven hundred Fire Departments now use Foamite-Childs equipment in one form or another.

The truck shown above is typical of the new *Childs* line of Heavy Duty Motor Apparatus—built and powered for the most strenuous service, yet within reach of any municipal budget.

Fire records plainly show that every apparatus, of whatever make, should carry *Foamite* equipment for controlling fires of oil, gasoline, chemicals, grease, etc.

The *Foamite* 2½-gal. Extinguisher throws out nearly 20 gallons of genuine fire-smothering Firefoam, which floats on burning liquids, clings to any surface, insulates against reflash, and does far less damage to property than water or liquid chemicals.

Many Departments have equipped trucks with the new *Foamite* Chemical Tanks in place of the familiar but less effective soda-acid tanks.

* * *

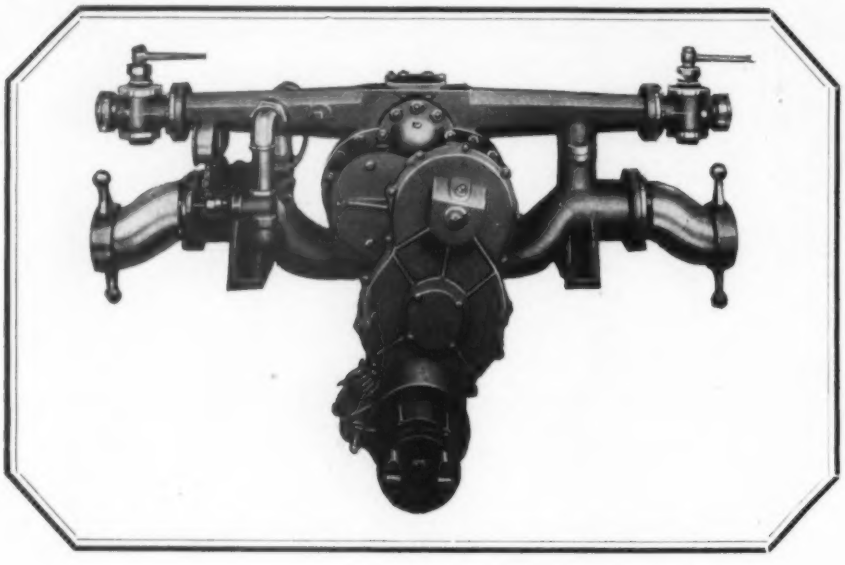
Write for catalogues, specifications, and prices of *Childs* Motor Apparatus and *Foamite* equipment.

FOAMITE-CHILDS CORPORATION
*Fire Protection Engineers and Manufacturers*
135 Turner Street, Utica, N. Y.
*Sales and Engineering Representatives in all leading cities*

# Foamite-Childs Protection

A Complete Engineering Service

*Against Fire*



# "Sound Teeth" For "Pump Health"

The teeth of a water gear wear and when they do it means a sick pump. NORTHERN Pumps are made with packing strips in the points of the teeth; they maintain perfect contact with the pump case continuously because they feed out as the edge wears down. NORTHERN Pumps stay healthy—they live long lives. Insist on getting NORTHERN Pumps on your new pumpers.

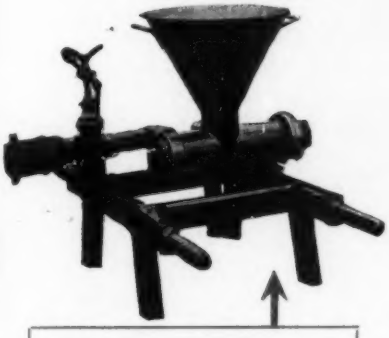
**NORTHERN FIRE APPARATUS CO.**

902—18th Avenue N. E. Minneapolis, Minn.

**ROTARY NORTHERN PUMPS**

# *Where You Have Water You Can Now Have Foam*

## *—a fire-fighting innovation possible only with*



# AMDYCO

## FOAM POWDER

**Used with the new Amdyco**

## FOAM GENERATOR

*Better Foam in Better Form*

**The AMDYCO FOAM GENERATOR**

is hooked up to an ordinary hose line just as easily and quickly as making a siamese connection. Amdyco Foam Powder is fed into the hopper, and the water flowing through automatically mixes the foam in any consistency desired. In other words, the stream comes in one end as plain water and goes out the other as foam. Enough powder, which comes in handy cans, can be carried conveniently on the regular fire apparatus to provide for almost unlimited quantities of foam.

The Generator, a portable outfit, is small, compact, and surprisingly simple in operation. It fits conveniently in the corner of an ordinary pumper hose body.

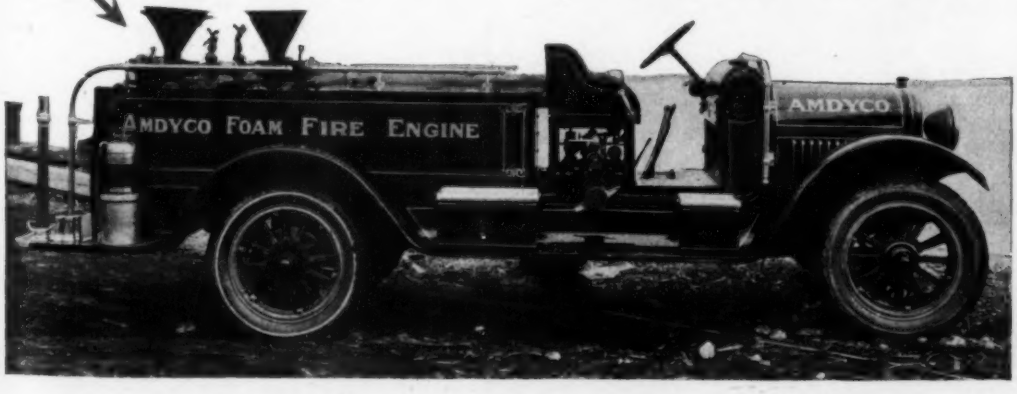
**MODERN science now brings to you, in the Amdyco method, a real practical solution of your worst problem today — fighting oil, gasoline and other flammable liquid fires. You no longer have to depend on "prepared" foam which because of its bulk and the necessity of mixing two chemical solutions, cannot be conveniently carried in dependable quantities.**

**With the Amdyco method, the Amdyco portable Foam Generator, hooked up to any of your regular pumpers or hydrants, provides an almost unlimited supply of superior foam. All you have to do is feed the single Amdyco Foam Powder into the generator and the flowing water does the rest.**

**Numerous tests, conducted under the auspices of leading fire protection authorities, have overwhelmingly proven Amdyco superiority.**

*Write us for the facts about these tests and descriptive literature covering the Amdyco Method.*

**AMDYCO CORPORATION**
**100 E. 42nd St., New York City**




**THIS PHOTO** shows a specially designed Amdyco Foam Pumper, fully equipped, for use where unusual hazards exist. The same pump can handle water streams as well as foam.

# A little journey through the GAMEWELL FACTORY

*Back of it all lies the Engineering Skill*

Fire alarm is based on engineering. Before the apparatus can be built it must be designed; proper materials must be selected and after it is built tests must be made. Before the apparatus can be installed the system must be engineered; floor plans must be made and many other problems must receive individual engineering attention—no two fire alarm systems being exactly alike. Then, after the system has been installed, engineering services must still be available for extensions and any emergencies that might arise.

Our Engineering Department is, for these reasons, one of the most important in our business. The main staff, located here at the factory, is equipped to handle any problems in fire alarm engineering. Its work can be classified into three main parts, i. e., research, designing, and layouts. For this latter, a complete staff of draftsmen, blueprinting equipment and photographic division are maintained.

In the field capable sales engineers are available at prominent points about the country, always ready to give advice and make personal surveys.

These surveys are passed along to the Engineering Department at the factory. Thus, when the municipality or industrial plant places an order with us for a fire alarm system it gets more than the apparatus for its money — it gets the engineering skill that has been acquired by this Company through more than a half century experience in the fire alarm business.

**$500.00 Firemen's Relief Contest**

Remember, there is a chance for you to make $250.00 or $500.00 for your Firemen's Relief Fund. If you have not seen the details write for bulletin.

## The Gamewell Company

**Newton Upper Falls, Mass.**

*"A Box A Block"*

# FIRE ENGINEERING

(A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER)

*The Leading Journal of the Fire Protection Profession*

VOLUME LXXIX MARCH 10, 1926 NUMBER 5


## Utilizing Boy Scouts in Fire Protection

### Growing Movement Among Fire Chiefs to Encourage Study of Firemanship by Scouts—Can Assist in Many Ways

By SHERMAN RYDER

*A MOVEMENT which has great possibilities and has already many accomplishments to its credit, is the enlistment of the Boy Scouts of America in the interests of Fire Protection. That this great organization of the youth of the country should take a prominent part in instructing the boys in the principles of firemanship has long been recognized by fire chiefs and the taking up of this work, with what has already been done, has proved the wisdom of the belief. The following article will, therefore, be of great interest to all chiefs who have taken an active part in forwarding the work of the Boy Scouts along these lines:*

Boy Scout Firemanship Merit Badge.

A uniformed Scout came into fire headquarters and asked for one of the officers. He wanted to pass his Scout examination for the Firemanship Merit Badge. The official was a regular examiner, and had put the questions and given instructions to many a Scout, just as firemen are doing all over the United States.

The test was rather simple. To obtain a merit badge for Firemanship, a scout must:

1. Demonstrate how to turn in an alarm for fire.
2. Demonstrate how to enter burning buildings.
3. Demonstrate how to prevent panics and the spread of fire.
4. Understand the use of hose,—unrolling, joining-up, connecting to hydrant, use of nozzle, etc.
5. Understand the use of escapes, ladders, and chutes, and know the location of exits in buildings which he frequents.
6. Demonstrate how to improvise ropes and nets.
7. Explain what to do in case of panic, understand the fireman's lift and drag, and how to work in fumes.
8. Demonstrate the use of fire extinguishers; how to rescue animals; how to save property; how to organize a bucket brigade; and how to aid the police in keeping back crowds.

#### Advantages of the Test

I talked this test over with a very thoughtful and experienced Lieutenant one day.

"Of course," he said, "this is a simple test, and nobody kids himself that a Scout who takes it will become a regular fireman right away. On the other hand these things are all useful, and are liable to come in handy any time. It stands to reason that the lad who has passed an examination will act quicker in an emergency than the one who hasn't!" (More than 30,000 Scouts have passed this test.)

In the big cities the Scouts are taught that the best thing a boy can do at a big fire is to help by *keeping outside the fire lines* where he belongs; he can be of most use by not getting in the way—by leaving the job to the men who know what to do.

There have been many cases, however, when a winter fire had involved severe exposure, when Scout troops have mobilized and served hot coffee to the firemen—and welcome they were indeed, within the lines.

#### Result of Sixteen Years of Organization's Growth

There are now, after sixteen years of growth, 24,140 troops of Scouts, a total of 513,087 boys all under the direction of 169-681 adult volunteer Scoutleaders. Thousands of these troops are in small towns, and in remote rural districts where the big fire risk is the forest fire, or the total destruction of some isolated group of buildings. Here there are no fire lines, no police, no well-organized, motorized department. In places of this kind large numbers of individual Scouts and Scout troops have done heroic work in fighting the red terror.

Courtesy, Western Actuarial Bureau

Exhibit by Boy Scouts in Fire Prevention Booth, St. Louis Safety Exposition.

Witness the case of fifteen-year-old Scout Harrison Odbert of Woodman, California. This Scout was bitten by a rattlesnake while fighting a brush fire during California's recent desperate war against forest fires. He coolly slashed the fang marks until they bled, and set out for his home, three miles away, when he arrived he found his house also on fire, and without complaining about his injury, he set to work and effectively aided in carrying out the furniture. The physician who later treated him said that his Scout training and fortitude had without doubt saved his life.

### Some Characteristic Newspaper Accounts of Scout Firemanship

The following news items are characteristic of the results of Scout training in firemanship:

## SCOUTS DO VALIANT WORK AS READY FIRE-FIGHTERS

### Many Testimonials to Their Courage and Quick Thinking in Moments of Danger

Saving property from fire ravages has been an outstanding Good Turn in Scout ranks during the recent vacation season. In camp and at home, boys have rendered valuable assistance in emergencies. Their quick and efficient work, according to reports received at the National Office, has earned them high commendation from beneficiaries and witnesses.

A fire insurance company for whom High Point (N. C.) Scouts saved thousands of dollars has expressed its appreciation in a practical manner. Three 300-candle power Coleman lamps, accompanied by a letter of thanks, arrived at the boys' camp shortly after the spectacular good turn. Following a small loss on a building near Jamestown, the local fire manager advised the company that the fire might have resulted in total loss, but for the alertness of Scouts encamped nearby. The boys, accustomed to daily fire drills, responded with prompt and effective cooperation when the call for help came.

### Help Woman Save Home

When a fire of unknown origin bit into the Hallock barn near Wayne, Mass., Mrs. Hallock rushed into the blazing structure in an attempt to save the automobile. Her efforts were futile and she was badly burned about the arms. Scouts, encamped in the vicinity, sighting the blaze, rushed to the rescue. The fire had gained such headway that the barn was burned to the ground in a short time, but the Scouts prevented the blaze spreading to the house. The fire-fighters also gave Mrs. Hallock first aid.

Twelve-year-old Scout John Gilmartin, of Allerton, Mass., styled by admirers the "hero of his gang and the neighborhood," is another energetic fire-fighter. John was recently walking down the street with companions when smoke was discovered coming from the cellar window of a residence. The other boys ran to a firebox but John went directly to the fire. With calmness and speed he attached the line of hose to the faucet, turned on the water, and began to drown the flames. Despite heavy smoke he remained at his post until the fire apparatus arrived. But as the boy had put out the blaze, the firemen had nothing to do.

### Save Timber Lands

Scouts of Hanover, Pa., trained to fight fire menaces in the wooded lands of that section, recently earned the praise of State officials for combating forest fires that swept Pigeon Hill. In a recent conflagration thirty Scouts spent twenty-four hours on burning timber lands, preventing the spread of flames over hundreds of wooded acres.

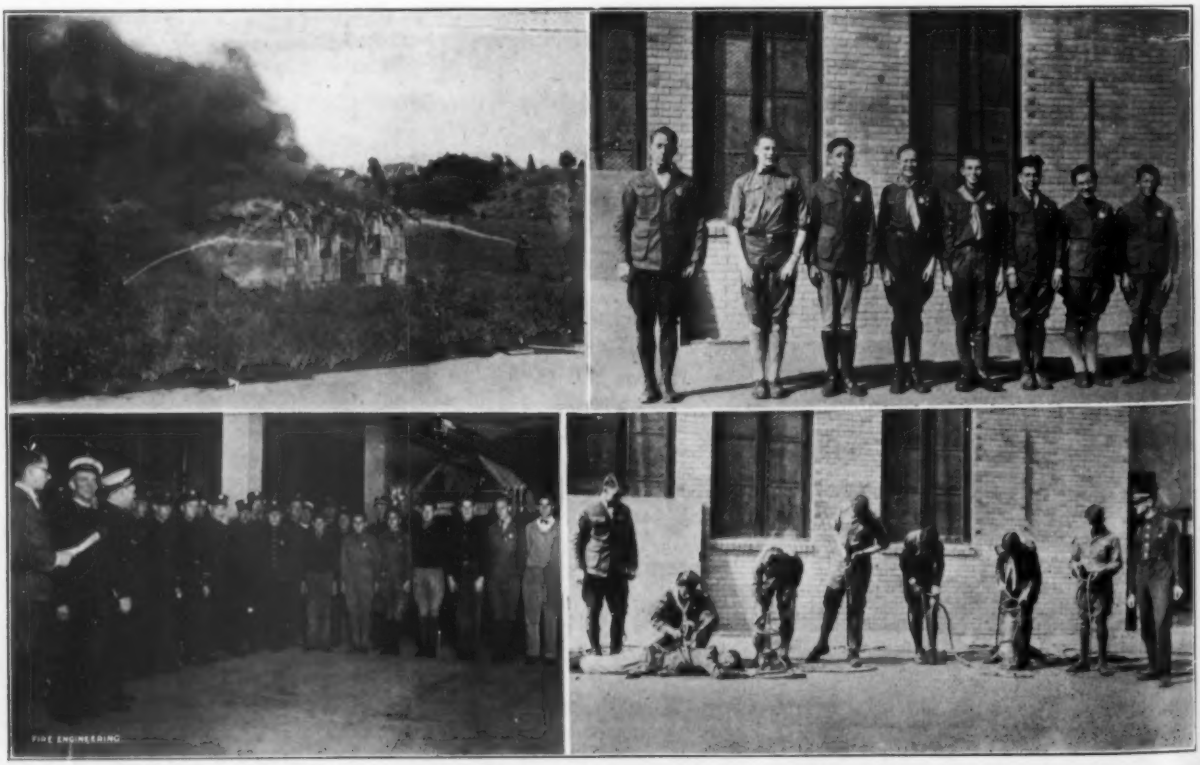
## BOY-POWER DID IT

What organized boy-power can do in the work of safeguarding a community is shown in the recent annual report of the Fire Department of Pasadena, Cal., in its special mention of the work of the Boy Scout Auxiliary Fire Department of that city. In the auxiliary are twenty-five active members and five associate members, states the report. Thirty drills were held during the past year, at which instruction was given in the following subjects: knots, use of hose, use of ladders, position of equipment on rigs, actual practice on rigs, practice with nozzles and couplings, and use of fire extinguishers.

### Render Valuable Service

Eleven fire prevention classes giving instruction in city fire ordinances, methods of giving talks on fire prevention, and discussions of new methods of fire prevention were held. Fire prevention talks were given by the Scout Chief and Assistant Scout Chief to nearly 1,000 people. Twenty-five inspections of garages, service stations, theatres and homes were made by members of the department. Approximately 150 cars were given tags for violations of city fire

(*Continued on page 267*)



Upper, Left, Boy Scouts of Pasadena, Cal., Giving Demonstration of Fire Extinguishment, Miniature House Used Being Built by the Scouts. Upper, Right, Officers of Pasadena Scout Auxiliary Fire Department. Lower, Left, Officers and Firemen of Pasadena Fire Department, with Scout Company. Lower, Right, Demonstration in Resusitation by Pasadena Boy Scouts.

# Chief Kenlon Submits Practical Traffic Plan

## Outlines a Co-ordinated Police and Traffic System, in Report to the Mayor, Which Should Prove Most Effective

*THE following plan, embodying not only a system of traffic control so as to facilitate the movement of fire apparatus in crowded sections of a city, but also constituting a complete system of police surveillance, has been submitted by Chief John Kenlon, of the New York Fire Department to Mayor Walker, of that city. Chief Kenlon's report is one of the most complete and comprehensive plans of police supervision ever devised, combining, as it does, the regulation of traffic from "fixed posts" and the keeping in constant touch between the men on these posts and the police and fire departments, so that they can be prepared to intelligently function in all cases of fire, robbery or other events requiring police attention. Chief Kenlon's report follows:*

Chief John Kenlon, New York City

TO HONORABLE JAMES J. WALKER, MAYOR, CITY OF NEW YORK:

As you realize, the present efficiency of the fire department is only maintained by constant endeavor to anticipate and provide for changing conditions which affect fire protection and prevention.

To date we have been successful in overcoming most of our difficulties by speeding-up and transmission of alarms; by installing a prearranged plan of company assignment making for prompt and rapid response to fire calls; and by cooperation with the police department, who clear a way through traffic for us.

In line with the policy of trying to anticipate developments that probably will affect the operation of this department, I have recently completed, a study of certain conditions in the Borough of Manhattan. This study was made because of a conviction that with the completion of the fire alarm system, the motorization of apparatus and the installation of the new assignment card; the continued efficiency of the fire department could only be maintained by an adequate system of traffic control. The same degree of control over traffic now existing must be continued but under greatly increased street traffic congestion conditions that statistics indicate are inevitable.

In developing this study a solution to the problem has presented itself which promises not only a logical system of traffic control, but also suggests a method—utilizing the spare wires now existing in the fire alarm cable plant—whereby the service rendered the public through the fire and police departments can be improved.

### Outline of the Proposed Traffic Plan

Briefly, the plan contemplates the following:

(1) Utilizing some of the spare wires now existing in the fire alarm cables for establishing a signaling system terminating at fixed points throughout the Borough of Manhattan.

(2) Establishing 329 of these fixed points and stationing a policeman at each one to direct traffic and answer police alarms transmitted over the proposed signaling system.

(3) Making use of the alarm system to notify policemen at the fixed points to be on the alert and open traffic for fire apparatus on the streets in their vicinity; to look out for criminals speeding their way or respond to local calls for police protection.

(4) The establishment of an assignment card or system whereby nearby officers are assigned for duty at a particular location in a strength proportionate to the alarm with provisions on the card for filling in by police reserves of posts left vacant by officers answering alarms.

In analyzing this study it must be borne in mind that there has always been a common purpose and therefore a sympathetic bond of understanding between the police and fire departments. Both departments are organized to protect life and property. The police are particularly charged to maintain order, prevent and detect crime and enforce law; the fire department to prevent and extinguish fire.

The common objective is arrived at through different avenues of approach but both departments make common use of the streets in pursuing their activities. Therefore it is evident that conditions in the streets will affect the efficiency of each department and they are particularly concerned in the control of street traffic.

Much time and thought, not to mention money, has been devoted to the traffic problem. But to quote from the report of the Committee on the Regional Plan of New York and It's Environs:

"Many of the expedients put forward to solve the traffic problem are doomed to failure because they are designed solely to relieve traffic and have no regard for the other functions of a street.

"In addition to the functions it performs as a highway in accommodating the movement of vehicles from place to place, the street is the right of way that affords access to and from all abutting buildings for all purposes of business, residential use, policing, scavenging and fire protection."

The fire department is principally interested in the streets insofar as they affect fire protection. However, the department also realizes that if it has any facilities inherent in its organization that are available for promoting the common good, then the use of these facilities should be proffered to the proper authorities.

It was this spirit that sponsored the following discussion which not only contemplates a control of traffic for fire department purposes but also indicates a method of notifying policemen of robbery or other police matters by coded audible signals transmitted over the spare wires in the fire alarm cables that now completely cover the Borough of Manhattan.

### Traffic

Probably the most highly desirable method of traffic control would consist of a system of automatic signals controlled from a central point and so designed as to be adaptable to the hourly changes of traffic congestion.

One cannot help but conclude after a study of traffic conditions, that there is no signaling system available at this time permitting control of the entire area of the city from one central point.

An analysis of information available also indicates that traffic conditions are so variable at different street intersections in various parts of the city, that it is questionable whether a centralized system of synchronized traffic control ever will be available.

### Variations in Traffic Conditions

To indicate the variation in traffic conditions it is only necessary to cite a few statistics. For instance: Of the estimated 205,000 vehicles constituting the total vehicular traffic entering Manhattan south of 59th Street on a week day, 65 per cent comes from the north, 27 per cent from Long Island, 7½ per cent from New Jersey and ½ per cent from Staten Island. The average speed of vehicles in Manhattan is 11 miles per hour, varying from a maximum of 15 to a minimum of 7 miles per hour. Along Fifth avenue this speed may be as low as 5 miles per hour at times of congestion. There is also a variation in the type of traffic. Crosstown traffic is principally motor-truck whereas motor truck traffic on Fourth avenue, Manhattan, is only 1/6 of the passenger car traffic and 1/3 of the taxicab and motor bus traffic. Regulation of traffic has probably been carried so far as practicable in many of the congested areas.

The latest trend of expert thought is evidently toward co-ordinated traffic control or the continuous movement of blocks of traffic at fixed intervals so timed as to permit continuous moving crosstown traffic to pass through appropriate gaps, somewhat similar to the method of train despatching.

These thoughts are brought forward simply to accent the fact that as conditions now are—probably the most satisfactory and elastic method of traffic control is obtained by the use of policemen at fixed points.

This is not entirely the old fixed post idea, for through the use of modern traffic control signal units it is not necessary for the policeman to remain in one spot all the time. He may patrol

a limited area after setting the time element on his automatic traffic signal to a proper interval for conditions as they then exist, changing this interval to meet changing conditions.

### The "Fixed Post"

There is no refuting the logic behind the "fixed post" idea. It may have to be curtailed because of lack of money or manpower, but it cannot be denied as the solution to many problems, not only traffic but other police problems.

No system of policemen stationed at fixed posts would be warranted, if they were used for nothing but traffic control, as traffic law violations constituted only 20 per cent approximately of the 346,270 arrests made in 1924.

One of the greatest objections to the fixed post has been raised because of the exposure to the policeman who was forced to stand at one point in all sorts of weather. The objection is removed under this plan as it is proposed to have the policeman control traffic from an auto-manual traffic control box located in a small shelter which should also contain a telephone, police alarm, fire alarm, heating device and other facilities.

In addition to their value in traffic control the fixed post policeman would also be of immense value because of the practicable impossibility of hold-up men or other criminals escaping through the cordon of police at the fixed post location particularly as these policemen have been instantly notified over the alarm system to be on the alert.

In considering the relatively small number of fixed posts suggested it must be remembered that this force is considerably augmented by the regular traffic police and others assigned to patrol duty.

Attention is also directed to the possibility of better coordination of police effort through the use of the fixed post in combination with the proposed police telegraph system. Because of the better control and supervision of the police force possible under such a system, it is probable that police activities could be enlarged or improved without increasing the numerical strength of the force.

### Proposed Signaling System

As previously noted it is proposed to establish, in addition to, but separate from the present police signaling system, a signal system connecting all fixed posts to a central point utilizing some of the spare wires at present existing in the fire alarm cables.

The present fire alarm plant in the Borough of Manhattan is new and complete. The cable plant is made up of a system of feeder cables supplying all fire alarm boxes and fire stations through a system of smaller distribution cables. This cable is entirely underground and totals 468.02 miles in length.

In designing the fire alarm cable plant a certain percentage of wires were allotted as spares. The number of spares is not a percentage of the working wires and could not be so, due to the necessity for limiting the number of various sized cables and certain splicing conditions which had to be met. These are details not essential for this discussion, however, our greatest interest being in the number of conductors available for use in the proposed police signaling system. Suffice it is to say that generally there is a surplus of 25 per cent in the feeder cables and 200 per cent in the distribution cables. This is sufficient amount to provide for the police signaling system without materially affecting the reserve strength of the fire alarm cable plant.

The location of the fixed posts having been selected, and as at each such post it is proposed to install police signalling equipment—a tapper bell, morse key and sounder—the thing that remains to be determined is the method of electrically connecting them.

**"The fire department is principally interested in the streets insofar as they affect fire protection. However, it also realizes that if it has any facilities inherent in its organization available for promoting the common good, then the use of these facilities should be proffered to the proper authorities."**

Analysis of the fire department running card indicates that in responding to alarms, fire apparatus most generally follows a north and south route. The electrical connections or circuits to fixed posts have been so developed as to, wherever the cable plant permits, alarm only those points in areas through which fire apparatus must pass. It is estimated that the total number of circuits will be approximately 25 for which adequate wire is available in the fire alarm cable plant.

As the fire alarm cable plant terminates in the fire alarm central office located on 79th street and Transverse road in Central Park, it is proposed that use be made of the balcony in the main building or that a separate building in the rear of this structure be erected for police alarm purposes only.

In this building it is proposed that suitable cable terminal facilities, motor generators, and selective signaling and registering devices be installed to permit proper operation. In addition the police operators at this point are to be in direct communication with police headquarters by telephone, teletype and telegraph so that they can immediately transmit over the signaling telegraph system appropriate signals warning of fire, hold-ups, or similar happenings. Details can then be 'phoned to the fixed posts using the present police signaling and telephone systems which should be rearranged so that a telephone box occurs at the same location as the fixed post.

### Method of Operation

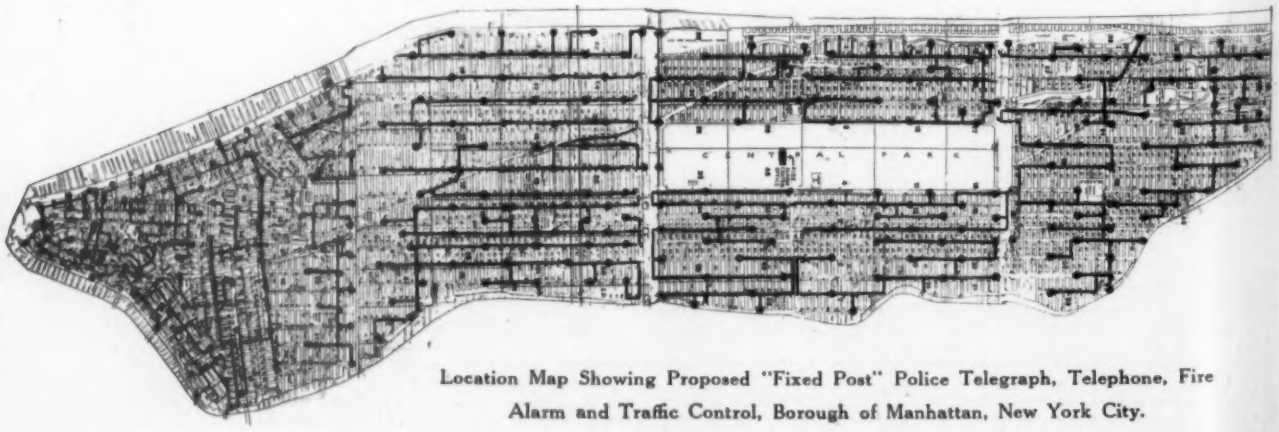
On receipt of a fire alarm the police operator is notified simultaneously with the fire companies. He immediately transmits five sharp taps at fast time over the signal circuits affected resulting in five blows on the single stroke bells located in each fixed post shelter. This warns the policeman at each fixed post to be on the alert and prepares him to control traffic so as to expedite the passage of fire apparatus.

Similarly in case of other police alarms. For instance, the police operator at signaling headquarters is notified of a robbery, receiving information over the telephone, that the criminals are speeding away in an auto. The operator immediately sends a warning signal indicating a highway robbery, say ten taps, to all fixed posts. The police telephone operator in the meantime is telephoning the details to the policeman on each fixed post.

While some form of printing telegraph is preferable to the use of the telephone for transmitting this information, it is not felt that the fixed post policeman will be handicapped by having to concentrate on a telephone conversation and at the same time handle traffic. When the telephone call is received he can set his traffic control box for automatic operation.

Again in case of a telephone to police headquarters asking for police aid. The police signaling operator at fire alarm headquarters can be notified. He then immediately transmits over a selected group of circuits a fixed post assignment number. In

(*Continued on page 267*)




**Location Map Showing Proposed "Fixed Post" Police Telegraph, Telephone, Fire Alarm and Traffic Control, Borough of Manhattan, New York City.**

# Take the Surest Water Supply to Hold Fire

## Depending on Limited Hydrant Supply Results in Fire Getting Away— Engines Cannot Deliver Full Capacity Unless Supply Is Available

THE fire described in the last issue of FIRE ENGINEERING brought out several important points. First, where there is any question about the available supply from water mains, and where unlimited water is at hand in rivers or other sources, the latter should be chosen rather than placing too much dependence upon the hydrant supply.

In this particular fire the department attached several engines to a single 8-inch main and in addition connected the industrial plant system to the same 8-inch main with the result that pressure was ineffective and all hydrant streams had to be discontinued.

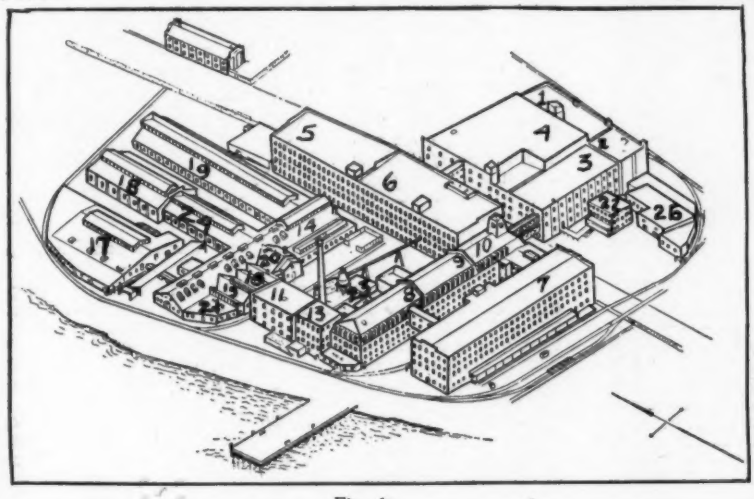


Fig. 1.

The use of hydrants on 8-inch main also made necessary long stretches of hose with the result that only small ineffective streams could be employed whereas heavy streams were necessary.

The presence of a river alongside of a plant, with facilities for placing engines at suction, was overlooked until the fire had gained considerable headway. Had this source of supply been taken advantage of at the very start, the fire would have been checked early and considerable property saved.

Another point brought out by this fire was that industrial plant brigades unless properly instructed may prove a detriment rather than an aid in handling a fire where it has gained large proportions.

### Failure to Call Help Disastrous

The failure to transmit a call for help to the municipal department permitted the fire to gain such headway that several buildings were involved before it was finally brought under control.

One of the first things for an industrial plant brigade to do in the event that fire is gaining headway is to notify the municipal fire department so that maximum help may be at hand at the time when it will be of greatest service.

To sum up the problem as given in the last issue of this journal, the fire started in the rough-finishing building of a large brass plant and getting beyond the control of the plant brigade quickly spread to surrounding buildings.

When the municipal department arrived several buildings of the plant were fully ablaze and fire was travelling fast through a large foundry building.

The plant is shown in Fig. 1, in perspective, and in Fig. 2 a plan is given indicating location of city hydrants and private plant hydrants.

Once the fire department of the city got in full operation and made use of the greatest source of supply at hand, the river, the fire was quickly checked.

Response to alarms in the section of the city in which this fire occurred is as follows: First alarm, engine companies No. 1 and 2, each company being equipped with a combination pumper and hose car; hose company No. 1 equipped with a combination chemical and hose car; ladder company No. 1 equipped with an aerial truck.

Second alarm, engine companies No. 3 and 4, each equipped with combination pump and hose car, hose No. 2 equipped with an automobile hose car and ladder company No. 2 equipped with a city service truck; third alarm, engine company No. 5 equipped with a motor combination pumper and hose car and hose company No. 3 equipped with a combination chemical and hose car.

The plant brigade consisted of three hose reel companies, but poorly manned at the time the fire occurred which was during noon hour when most of the workmen were home to lunch.

The only available supply of water from the city main system was provided by an 8-inch main connected to a 12-inch main of the city system 1,000 feet distant. Four hydrants were at hand, as shown in Fig. 2, on the city main and 14 hydrants connected to the private main system of the plant.

When the alarm was turned in for the city department, fire had spread to buildings 15 and 16 and had entered No. 20 and No. 14. Fire was also entering building No. 11 at the time of the arrival of the first apparatus from the city.

### Suggested Method of Handling Fire

The following is a suggested method for handling this fire from the time when the city apparatus reached the grounds:

Due to the long stretches necessary from the city hydrants on the 8-inch main, and, the limited supply from this main, only two engines will be connected to the main: At hydrants Nos. 3 and No. 2.

Place engine No. 1 at hydrant No. 3 and stretch two lines at once through the alleyway between buildings 6 and 10 to the rough finishing shop buildings 15, 16 and 20. These lines to head off the fire and check from entering foundry if possible.

If fire has entered the foundry one of these lines should be diverted around into the foundry to check the fire from entering further.

One of the lines will operate in building No. 20 to hold the fire from entering that building.

The object is to confine the fire until additional streams are put in operation.

If the exposures are properly covered and the spread of the fire is checked, the work of putting it out is comparatively simple.

Engine company No. 2 placed at pier, taking suction from the river, and stretching two lines one to operate in foundry and other to operate in building No. 21 or 15 as the occasion requires.

At this point the officer in charge of the first assignment will have noted the conditions and it will be evident that additional apparatus will be required. He will thereupon transmit second and third alarms.

In the meantime the lines operating from hydrants Nos. 7, 8 and 6 of the plant system should be stretched in to operate in the packing and shipping building No. 11, in an endeavor to hold the fire from entering the power plant.

If necessary the lines from engine operating at hydrant No. 3 of the city system should be diverted to hold the fire from entering the power plant if necessary, though this is unlikely.

Employ men of hose company responding on first alarm to stretch a line from hydrant No. 14 of the private system to help check the fire from spreading in building No. 20.

If available men are at hand an additional line should be stretched from hydrant No. 11 of the private system to work in the foundry building No. 14, the line from hydrant No. 14 operating entirely in building No. 20.

Engine Co. No. 3 upon arrival to be placed at hydrant No. 2 of the city main and two lines stretched in with the aid of members hose company responding on this alarm. These two lines to be operated in foundry building No. 14 to aid in handling fire therein and also to operate on fire in buildings 15, 16 and 20 if possible. Engine Co. No. 4, stationed at pier and two lines

stretched to buildings Nos. 11 and 15. These lines to check fire and if possible wet down.

Engine Co. No. 5 to be placed at pier and two lines stretched in, one of them going by ladder to the upper floors of building 11 and the other to lower floors if necessary.

This is the most severe hazard of the layout due to its highly combustible occupancy and every effort must be made to drive the fire from this building. By keeping the fire out of building No. 23 and maintaining the plant fire pumps available for continued use it is likely that the fire will be held in buildings Nos. 21, 15, 16, 20 and 11. However, should there be any indication of fire getting beyond the control of the department the remaining engine company should be called as well as one of

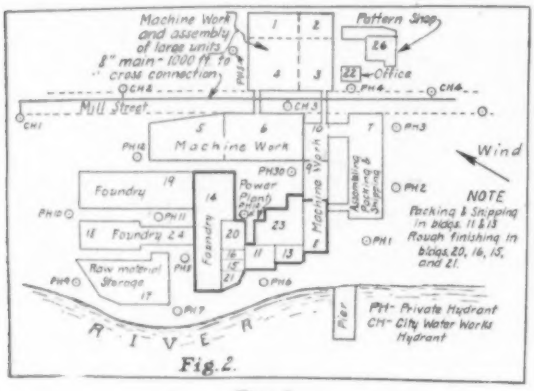



Fig. 2.

the steamers. But it is not likely that this will be necessary if all exposures are covered and streams are judiciously used.

As in all fires, the first step is to head off the fire at points where it is apt to spread, then as additional lines become available they are assigned to the work of closing in on the fire. After it is certain that all possible points of extension are properly covered, operations are directed toward the extinguishment of the blaze.

## Massachusetts Fire Chiefs' Club Meets

The February meeting of the Fire Chiefs' Club of Massachusetts was held at Young's Hotel, Boston, on Wednesday, Feb. 17 after the usual luncheon which was attended by fifty chiefs. The president of the club, Chief William F. Daley, of Brockton, was in charge of the proceedings and was assisted by the secretary, Ex-Chief A. Howard Fiske, of Framingham.

A. C. Whiting, of the Boston office of the Amdyco Corporation, was a guest at the meeting and gave a talk on the operation of the Amdyco continuous foam generator for use in fighting oil fires.

## Chief Peter Carter Goes to Collingswood, N. J.

Chief Peter Carter of Camden, N. J., has tendered his resignation from the department to be effective from April 1, 1926, following twenty-six years of service in the department. From that date on he will be placed on the pension list, and he will then go to Collingswood, N. J., a thriving, growing municipality on the edge of Camden, to organize a partly paid fire department.

Chief Peter Carter, Camden, N. J.

Chief Carter entered the department on March 1, 1900, as a driver of No. 2 Chemical Company; in 1907 he was made captain of No. 1 truck company and in 1911 was transferred to No. 1 engine company. In July, 1914, he was made deputy chief and in September, 1915, he was made chief engineer. Chief Carter has held that position until the present time. Collingswood, N. J., where he will be chief engineer, has a population of 16,000 and an assessable property list of sixteen million dollars. This is divided in schools and churches, four million dollars and merchandise between four and five million dollars. The apparatus consists of one American-LaFrance city service truck; one Hale pumper, one Martin combination wagon, one Martin pumper and one Reo combination wagon.

His service as treasurer of the International Association of Fire Engineers dates back a number of years and the many friends that he has made in the association wish him success in his new connection.

**Riverton, Wy., Elects Chief**—J. A. Fegley has been chosen chief of the fire department in Riverton, Wy.

**Walker, Minn., Elects Chief**—At the annual meeting of the fire officials at Walker, Minn., Fred Grindall was elected chief; Homer Culver, assistant chief, and R. J. Broughton, secretary.

**Westfield, Mass., Firemen Ask More Pay**—The members of the Westfield, Mass., fire department have renewed their request for an increase of 15 per cent in salaries.

**Penn Yan, N. Y., Wants Equipment**—The Hydrant Hose Company of Penn Yan, N. Y., has appealed to the city for a rotary pump of 110-horse power.

**Sales Force of the Gamewell Company, Assembled for Three Day Sales Convention**

The Gamewell Company of Newton Upper Falls, Mass., manufacturers of fire and police signaling systems, assembled its organization shortly after the new year for a three-day sales convention at the factory. Among those attending the convention were the Company officials, engineers, factory heads and sales agents from all over the country.

# Controlling the Dry Cleaning Plant Hazard

## Importance of Proper City Ordinances—Buildings Should Be Fire-Proof and Apart from Others, and Electric Power Isolated

By CHARLES J. MATTSON, Deputy State Fire Marshal of Illinois*

*THE dry-cleaning hazard is one practically all chiefs have to deal with. This paper offers some excellent ideas on the control of this type of industry:*

Dry cleaning is a most hazardous operation, unless done by an experienced operator in a building properly erected and equipped. Dry cleaning should never be done by one who is not fully acquainted with these hazards and especially not in the home as this jeopardizes the lives of women and children.

### Done Most Anywhere and Anyway

We find dry cleaning done most anywhere and anyway. In sheds, barns, garages, basements and rear ends of business buildings. No consideration is given to ventilation, heating plants, gas plates, lighting, power plants, storing of cleaning liquids or safe installation of machinery. Ofter we find cleaning done in open troughs and tubs and when the operation is completed dirty gasoline is thrown into the sewer or in open spaces. We have found parties smoking in places like this and when their attention is called to the hazards we are told, "I am careful and have never had a fire."

### Suggestions Appreciated in Up-to-Date Plants

On the other hand, we find many up-to-date cleaning plants where every precaution is taken to safeguard life and property. Any suggestions we may make to bring added safety is greatly appreciated by owners and operators of such plants.

### Fire Hazards from the "Muck"

While doing inspection work recently in a city not so far from Moline, the fire department was called to a fire. It was discovered the alley and several buildings along the alley were burning. On investigation we learned a dry cleaner was throwing the muck out in the alley; this day it ran down the alley past a garage some distance away. One of the mechanics in this garage ignited a piece of waste, dropping it to the floor. Becoming a little excited he kicked it out in the alley, igniting this muck and the whole alley was aflame and also several buildings.

We called on this cleaner. He admitted throwing out this muck, stating that it contained less than 5% inflammable liquid. This proves how hazardous these liquids are.

### Buildings Should Be Apart from Others

Buildings used for dry cleaning plants should be separate and apart from any other buildings. They must be fire-proof, with the floor above the surface of the ground surrounding the building and with no space underneath the structure.

The building should be well ventilated with vent holes in the wall at floor line and an exhaust fan of sufficient capacity to change the air in the building every three minutes, which should be kept in operation during the use of the building.

The fan should be located in an air tight and fireproof conduit, whose inlet opening should be near the floor level and the discharge or outlet should extend at least two feet above the roof and terminate in an approved ventilator hood.

Every dry cleaning plant should be equipped with high pressure steam boiler or fire extinguishers of approved type of sufficient capacity to furnish adequate fire protection at all times. Steam pipes should be arranged with outlets near the ceiling with valves on outside of building, easily accessible in case of fire.

### Electric Power Room Should Be Isolated

Whenever steam or electric power is used for operating machinery, the boiler or motor room may be located in the same building providing a 12 in. masonry fire wall with no openings be built to separate such power room from dry cleaning plant. All doors should be fire doors, all windows metal sash, glazed with wire glass or all windows provided with fire shutters. Exit doors should swing out and I think all dry cleaning rooms should have two exits directly to the outside well separated.

No connection should be allowed from any such dry cleaning building with any public sewer.

The lighting should be done by electricity in the most improved manner, all wires running in conduit, all lamps approved vapor proof with keyless sockets and all switches placed outside of dry cleaning room.

All of the volatile liquids must be stored in approved underground tanks, installed considering the amount of such storage. No tank should be installed less than three feet below surface of ground, and the top of tank should always be below the level of the lowest pipe in the building. No connections should be made to any such tank with any public or private sewer catchbasins or pit.

All machines should be closed machines and volatile liquids conveyed to them from underground tanks in closed pipes by means of suction pumps properly controlled by valves. All machinery should be grounded with No. 14 copper wire to permanent moisture. No open troughs should be permitted. No dry cleaning liquid should be settled within any open vessels or tanks.

### Chiefs Should Advocate City Ordinances

I am sure all chiefs agree that these things should be done to safeguard life and property and they can greatly aid by advocating that their home town pass ordinances which governs this kind of business. All that I would care to add is: Our transportation facili-

**"It is not fair to firms which erect modern dry cleaning plants to allow others to conduct the same kind of business without any aim to safety, nor is it fair to adjoining businesses to allow a plant of this kind in their midst. This matter can be controlled by ordinances."**

* From paper read before the annual convention of the Illinois Firemen's Association.

ties are such now that a few miles means very little, therefore plants of this kind could be located on the outskirts of our cities, thereby jeopardizing less life and property. It is not fair to the firms which erect modern dry cleaning plants to allow others to conduct the same kind of business in hap-hazard buildings without any aim to safety nor is it fair to adjoining business to allow a plant of this kind in their midst without their consent.

This can be controlled by ordinances which specify how, and where such plants can be erected and as to enforcement if it becomes necessary the State having concurrent jurisdiction should through the state fire marshal's office assist the local officials whenever called upon.

## FIRE APPARATUS IS FREE FROM MANUFACTURERS' EXCISE TAX

**Clause Imposing This Tax Eliminated from Article 12 of Regulations Governing Commercial Taxation**

IN a communication to FIRE ENGINEERING, in reply to a request for information on the subject, D. H. Blair, Commissioner of Internal Revenue, United States Treasury Department, writes that, by the elimination of the reference to fire apparatus in Article 12 of Regulations 47, as amended by the Treasury Department's decision, manufacturers are relieved from the payment of the tax imposed by the Revenue Act of 1924. Mr. Blair writes:

"You are advised that Article 12 of Regulations 47, as amended by Treasury Decision 3782, reads as follows:

> "'Tank trucks for carrying oil, gasoline, water, etc., moving and furniture vans, and drays, delivery wagons, automobile hearses, etc., are all classified as automobile trucks and automobile wagons. Chassis and bodies designed for use in the production of such vehicles are taxable under subdivision (1), if sold for prices in excess of those specified therein.'

"The elimination from Article 12 of 'fire apparatus, including fire engines, hose carts, hook and ladder trucks, water tower trucks, etc., means that such articles are now held to be exempt from the manufacturer's excise tax imposed by section 600, Revenue Act of 1924, and corresponding sections of prior Acts."

## Climax Appoints Southwestern Engine Dealers

The Climax Engineering Company of Clinton, Iowa, has appointed the Briggs-Weaver Company of Dallas, Texas, as distributing representative. This company will handle the sale of Climax "Trustworthy" engines for industrial purposes. The Petroleum Electric Company of Tulsa, Okla., has also taken on the sale of Climax engines in the southwest. P. J. Dasey, Wells Hotel, Tulsa, will supervise the sales of these new Climax engine dealers.

## Assistant Chief Anderson Dies at Atlanta, Ga.

J. H. Anderson, assistant chief of the Atlanta, Ga., fire department, died at his home in that city on February 26, aged 58 years. Chief Anderson's death was due to injuries he received while fighting a fire more than a year ago. He was one of the oldest veterans of the Atlanta fire department, having served for more than 33 years. He left a clean and honorable record. His survivors are his widow and a brother.

**Kansas City, Mo., Adds Apparatus**—Kansas City, Mo., fire department has added a 750-gallon pumper. Another similar machine and a service and ladder truck are still to come.

**Cedar Falls, Ia., Firemen Presented with Radio Set**—The members of the Cedar Falls Commercial Club presented a five-tube radio set to the fire department as a Christmas gift. Chief Peterson said that there will no longer be any monotony at the station.

**New Fire Apparatus for Griswold, Ia.**—Griswold, Ia., has purchased a chemical apparatus. It will be mounted on an International truck chassis, and will consist of two chemical tanks, 250 feet of hose, ladders, axes and other fire-fighting implements. The new American LaFrance equipment will be delivered about Feb. 1st.

## EASTERN REGULARS TO VISIT HAVANA ON WAY BACK FROM CONVENTION

**Three-Day Stop-Over Planned at Cuban City on Return Trip from I. A. F. E. Gathering—Two Itineraries**

ON their annual journey to the Convention of the International Association of Fire Engineers, which this year is to be held at New Orleans Oct. 19–22, the Eastern Regulars will have as a feature of the trip a three-day stop-over at Havana, Cuba, according to an announcement just made by Frederick E. Bensen, who is making all arrangements as in previous years.

Two itineraries have been laid out, one with and the other without the Havana side trip. The party will leave New York by special train Oct. 16th, arriving at New Orleans the day before the convention opening. Immediately following the Convention, those going to Havana will sail from New Orleans on the S. S. Calamares, a luxurious 15,000-ton liner of the United Fruit Company's fleet. After the three-day visit at Havana, which will be marked with interesting side trips to various points in Cuba, the party will leave aboard the same steamer, returning to New York Oct. 31st.

On the other itinerary, arranged for the convenience of those desiring to go directly home from New Orleans by rail, special cars will leave after the wind-up of the Convention, arriving in New York Oct. 24th.

According to Mr. Bensen the total round-trip cost of the journey covered by the Havana itinerary, from New York, will be in the neighborhood of $200, which pays all railroad fares, meals and side trips, with the exception of the four-day stay at New Orleans.

The Eastern Regulars, which are made up of Chiefs and other fire officials from various parts of the east, particularly in the vicinity of New York and in New England, have been making these special convention trips regularly for the past nine years under the direction of Mr. Bensen. This will make their second visit to Havana, the first being in 1923 following the Richmond Convention. The great time the Chiefs had there then was one of the reasons that prompted arrangements for this second visit.

While the trip is still several months off, it would be well for those wanting to join the party to make tentative reservations because of the limited accommodations. This may be done by communicating with Fred E. Bensen, Metropolitan and New England Manager of the Eureka Fire Hose Mfg. Co., 50 Church St., New York.

**Four Volunteer Firemen were Killed in this Blaze**

Four firemen were crushed to death under the falling walls of the Waynesburg, Pa., structure shown in this view, and five others were more or less seriously injured. A hotel, a church and a business building were destroyed, with a loss of $750,000. The fire originated in a restaurant on the ground floor of the hotel. The guests of the hotel escaped safely in their night clothing.

**Weather Bureau to Issue Fire-Weather Warnings**—The weather bureau will resume the practice of issuing fire weather warnings for the forest districts of New York and New England. Boston will issue forecasts for New England with the exception of Connecticut, which will be handled from New Haven; New York will be served by Albany. Warnings will be issued when conditions are ripe for the spread of forest fires.

# WITH THE EDITOR

## A Comprehensive Traffic Plan

Any move to improve traffic conditions is welcome in these days of the automobile, so that the proposed plan suggested by Chief Kenlon to the mayor of New York City is particularly acceptable.

Probably there has never been formulated a traffic scheme—at any rate from the standpoint of the fire department—more comprehensive and complete than that set forth by the New York Chief in his communication to the mayor, published on page 233 of this issue.

Not only does this plan take into consideration the clearing of the streets for the fire apparatus, but it also includes a plan of complete police control, by means of which policemen on "fixed post" are placed in immediate touch with not only the fire department, but also their own precincts and the police department as a whole.

The men on fixed posts in the proposed plan are to be placed in special booths, in which means are provided for communication, so that the policeman can at once, in case of fire, robbery, accident or other untoward happening, be acquainted of the facts and be prepared to act instantly.

In case of the approach of the fire apparatus all of the policemen along the route the engines are to take will at once be notified, and the consequent regulation of traffic will be a long step in advance of present methods.

That such a plan should originate from a fire rather than a police chief should be a matter of no little congratulation on the part of the fire service. However, it is quite natural that Chief Kenlon should take the lead in the matter of traffic regulation, for besides his opportunities to observe conditions in New York City, he has made a study of methods both in this country and abroad, and in addition to this, he has shown himself to be a clear and logical thinker.

The plan as suggested is quite feasible, with certain modifications, for application to practically every municipality of size and it should prove of inestimable value as a foundation for improved traffic regulations throughout the cities of the United States which are suffering from the traffic and police problems.

## Right of Firemen to Drive Fast

The authority of fire departments to drive at a speed higher than the legal rate of travel for commercial and pleasure vehicles in a city when responding to a fire alarm has often been questioned.

In many cities this subject is covered by ordinance so that no question can be raised, but in the event of no governing ordinance then the fire department has frequently been held responsible for damage to property through what was termed "reckless" driving.

In a recent case involving the liability of a city for fatal injuries sustained by a fire chief through a defect in the street while he was driving to a fire, the West Virginia Supreme Court of Appeals recognized the right of members of a fire department to travel at a speed which would be negligent for one's own safety and the safety of others as to an ordinery traveller on a city street. But the court, following what courts in other states have decided, ruled that firemen must nevertheless exercise what constitutes reasonable care, considering the nature of their duties. In this connection an observation made by the Supreme Court of Minnesota is of interest: "It is often the duty of a fireman, when attending a fire or responding to a fire alarm, to act regardless of a considerable degree of danger to himself. To hesitate or stop at every slight indication of danger might often mean dastardly failure of duty on his part.

"His duties are of a public character, and in cities of a considerable size these duties are exceedingly important. On many occasions, his instant and fearless action is imperatively necessary to prevent widespread disaster, loss of property, or the loss of life, or both; and, when he is called, he seldom knows the urgency of the occasion until he arrives on the ground."

These rulings, as do similar rulings, emphasize the right of fire departments to travel at a speed greater than business or pleasure vehicles, but, of course, gross negligence or recklessness makes the fire department liable. Despite the urgency of the occasion, reasonable care must be exercised at all times.

## The Boy Scouts and Fire Protection

One of the most remarkable and helpful signs of modern times has been the formation and success of the Boy Scouts of America. This organization aims to make the youth of the nation clear thinking, clean living and thoroughly manly.

It may safely be said that the organization has accomplished what it set out to do and that its influence on the boys who have joined its ranks has been wholly beneficial.

It is quite natural, in view of the aims and accomplishments of the organization, that fire chiefs should turn to it for the purpose of forming youthful auxiliaries to the fire department. And it is equally logical that such a society should turn to the fire-fighting profession for an inspiration for its membership.

This is exactly what has happened. In many cities Boy Scout Auxiliaries have been formed for fire-fighting and fire protective purposes. In practically every instance of this kind the body has been made up

through the cooperation and assistance of the fire chief.

In such auxiliaries care has been exercised to impress upon the members that they must be in all things helpful to the fire department and its chief. They must not presume upon their membership to enter the fire lines or get in the way of the fire-fighters. They must cooperate with the fire department in all kinds of fire prevention work.

One of the best things the Scouts can do is to keep a careful watch for violations of the fire prevention laws, and to report any thing of this kind observed at once to the chief.

The utilization of the Boy Scouts in matters of this kind has another important angle. It is the education of the healthy and clean youth in the fighting of fire, so as to form a working nucleus for filling the ranks of fire preventionists and fire departments as well.

It is none too easy to procure recruits for fire protection work. The Scouts organization would form a body of youths whose enthusiasm is already enlisted in the cause of fire-fighting and fire prevention and who will naturally show an active interest in this profession in their future careers. This alone should justify the formation of a Boy Scout Auxilliary of the fire department.

## Keystone Fire Chiefs' Association Meets

With one of the largest attendances in its history, the Keystone Fire Chiefs' Association held its business session and banquet at Reading, Pa., on February 20. The principal purpose of the meeting was to adopt the new by-laws. A reception followed, after which a banquet was given.

Chief John C. Niethammer of the Reading fire department, presented Ex-Chief Francis E. Soule, of Coatsville, president of the association, as toastmaster. After complimenting the hosts, the toastmaster called on Mayor William E. Sharman, who spoke mainly on traffic matters. He pointed out the danger encountered by firemen in getting to fires under the present congested condition of the Reading streets, and said that a remedy must be sought, even though it cost the citizens increased taxation.

Chief Niethammer followed with a few facetious remarks, and Councilman William J. Smith, Superintendent of the Department of Safety, paid a deserved tribute to the volunteer firemen. Charles E. Clark of Wayne, secretary of the State Firemen's Association, outlined the work of the state body and referred to the granting of workman's compensation to the volunteers. Seibert L. Whitman, head of the fire prevention bureau in Reading, emphasized the necessity of keeping the streets in the best of condition, in order to protect the life of citizens and to enable the fire departments to make the best time in responding to alarms. He referred to the enlistment of Chief Niethammer in the interest of good roads, and urged him to continue in the good work.

Chief Franklin Gilkeson of Bristol, submitted a draft of the revised by-laws, which, after making a few changes, were adopted. Among the new provisions is the election of three trustees, and the following were chosen: Howard Frey of Collingsdale; Charles E. Clark of Wayne; William L. Stackhouse of Hulmerville. Four classes of membership were created —active, active life, honorary life, and beneficial. Instead of one fund, three were provided—current, endowment and death benefit of $100. Another amendment calls for five standing committees—membership, fire prevention, legislation, drills and training, and education.

**St. Joseph, Mich., Wants Apparatus**—St. Joseph, Mich., is reported to be in the market for fire apparatus, having appropriated about $12,000 for the purpose.

**WHAT TOPICS DO YOU WANT AT NEXT CHIEF'S CONVENTION?**

**THE officers and directors of the I. A. F. E. will meet in executive session at New Orleans, La., early in April, to lay out the program for the coming convention.**

**President James Armstrong invites your co-operation.**

**He wants suggestions for topics to be taken up at the convention.**

**Here's your opportunity to bring before the next convention the subjects you are interested in.**

**Here's your opportunity to have explained on the convention floor those problems which you have encountered during the past year.**

**It's up to you to say what you want: Time is short; write immediately to the President, James Armstrong, Chief of Fire Department, Kingston, Ont., Canada; or to the Secretary, James J. Mulcahey, Chief of Fire Department, Yonkers, N. Y.**

**Let them hear from you!**

## Chicago Makes New Traffic Laws

Under the direction of Dr. Miller McClintock, traffic engineer of the Chicago Association of Commerce, a new system of traffic regulation is being worked out for the city and vicinity. These include rules designed to prevent over-crowding or blocking thoroughfares with parked automobiles. Also it is planned to severely penalize blocking of fire hydrants, interference with apparatus responding to alarms, etc. With the construction of the modern movie theatres, seating thousands, the parking of cars in the adjacent streets has brought about a serious situation, and this is one of the things that are to be eliminated, it is said.

## Arnold H. Jones Dead

Arnold H. Jones, former Mayor, and for many years chief of the fire department at Rockland, Me., died at his home in that city on February 28. He was 68 years old, and had been associated with the Rockland newspapers from his boyhood. Deceased was a native of Woodstock, N. B.

## Thief River Falls, Minn., Re-elects Midderigh

Chief Paul Midderigh has just been re-elected for the fifteenth consecutive year head of the Thief River Falls Fire Department. He was a member of the first organization.

One hook and ladder truck purchased from the Watrous Engine Company of St. Paul, Minn., and two 5-gallon Babcock fire extinguishers, the whole costing less than five dollars, constituted the nucleus of the fire department organized in 1894, in Thief River Falls, Minn. Forty-seven citizens offered their services as firemen, several of whom are still residents of that city. H. E. Mussey, now publisher of the Grygla Eagle, was elected the first chief, and following him have been Louis Lonson, C. C. Jackson, Emil Zeh, James Farr, G. D. LaSage, Phil Zeh and Paul Midderigh, the present incumbent. The only honor attached to the position of fireman in the early days was a fine of one dollar for every fire missed where water was used, and fifty cents where water was not used. In 1896 the city agreed to pay the firemen $1 for every alarm to which they responded, and in 1912 the first horse-drawn apparatus was placed in service. Under Chief Midderigh the fire department has been gradually ascending the scale of efficiency, until now Thief River Falls considers itself well protected from the standpoint of fire.

**Cambridge, Mass., Has Lieutenant List**—In a recent examination in Cambridge, Mass., for promotion to lieutenant, 44 of the sixty-one candidates were declared eligible.

# QUESTIONS AND ANSWERS

Conducted by FRED SHEPPERD, B. Sc., M. E.

*"He that questioneth much shall learn much"*—BACON

NOTE—Readers of FIRE ENGINEERING are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

## Cleveland Questions and Answers

*To the Editor:*

Will you kindly print the following questions and answers thereto in an early issue of your journal?

Respectfully yours,

J. E. T., Cleveland, O.

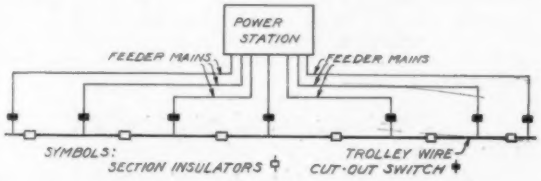
Question 1. How would you cut a trolley wire that was in your way at a fire?

2. (a) What is back-draught?
(b) How is it caused?
(c) How may it be averted?

3. Explain the best method of fighting: (a) A lumber yard fire; (b) large oil and gasoline fire; (c) a fire at a tar factory.

(NOTE—*Questions 4, 5 and 6, with the answers, have been omitted and will be published next issue*—EDITOR.)

*Answer* 1. Action in cutting a trolley wire would depend upon the type of electrical distribution system encountered. If in the




suburban section where there is only an occasional car running then it is likely that the trolley wire is fed only at one point. In this case it might be a difficult and slow process to locate the power cut-off box controlling the section and it might be impossible to quickly get in touch with the railroad company to have the power cut off. In this case the wire would have to be cut while still charged. If this is necessary, first take particular note of the direction from which the current is coming—that is the direction of the power station. It is assumed that the power flows from the power station out along the trolley wire and returns through the trolley car and by way of rails back to the power station again. In this case place a ladder against wire supporting trolley wire and have man go up ladder equipped with rubber gloves and wire cutter. Cut wire close to supporting cross wire so that the live end will remain up out of the way of men working on the street. The dead end falls to the street.

But it is unlikely that there would be an occasion to cut trolley wires in suburban sections where the buildings are not high and where there is little use for ladders.

On the other hand it is more likely that it would be in operation at large fires in the heart of the city where it would be necessary to remove trolley wires.

In this case the situation is entirely different.

The manner in which power is furnished to the trolley wire in large cities is indicated in the sketch herewith.

In the first place the trolley wire is divided into sections which may be a block, two blocks, three blocks or even longer in length.

However, the sections usually run in the neighborhood of two blocks in length. These sections while appparently continuous are actually separated from each other by section insulators.

At the point where the feeder connects to the trolley wire there is provided on the pole supporting the trolly wire a cut-out switch. This switch controls the flow of current to the particular section to which it is attached.

Usually the location of the switch is indicated by a sign either on the post or on the cross wire supporting the trolley wire as follows: "Power Cut-off" or "Section Cut-off."

If it is necessary to cut a trolley wire then the first thing to do is to see that the switch controlling the section in which the wire is to be cut is first opened. This "kills" this particular section. Then the men can operate in cutting the trolley wire in the easiest possible manner, although precaution must be observed at all time even though it is quite certain that the power is cut off to make sure that no one receives injury through charged wire. The wire should be assumed as charged even though the cut-off switch has been opened.

The men should use rubber gloves and rubber handle wire cutters in cutting the wire. In the sketch the section insulators are indicated, and power cut-off switches shown by the symbol S W.

*Answer* 2. (a) Back draft is the backward rush of air through doors, windows or other openings in a building, and may be sufficiently severe to blow men off fire escapes or ladders or even blow them from doors. Frequently doors and windows are blown out by back draft.

Probably the most plausible explanation of back draft is as follows: At a fire which has been burning for some time and which is fairly well closed in, the larger part of the available oxygen will have been burned up. This tends to cause the fire to smoulder and throw off heavy fumes and smoke, the fumes in many cases being highly inflammable.

(b) When a door or window of a room is subsequently opened up at a fire of this sort and fresh air finds its way to the fire, as soon as it reaches the fire it supplies the needed oxygen to cause combustion and instantly the combustible gases in the building are ignited. The result is exactly the same as igniting combustible gases in an automobile cylinder where the gases expand and exert tremendous force.

Precisely the same thing happpens in the case of buildings filled with combustible gases and which are ignited after being supplied with air. The gas flashes instantly and creates a pressure which relieves itself by passing through open doors or windows. If the openings are not sufficient to relieve the pressure then doors or windows may be blown out.

(c) Back drafts are hard to avoid and there is no positive precaution against them. Probably the best move to prevent back drafts and which should work in most cases is to provide plenty of ventilation above the fire, preferably in the roof, so that the gases can rise and pass off, and then when opening up for operation several doors and windows should be opened at the same time so that in the event of an explosion there would be plenty of passageway for the gases to free themselves and relieve the pressure.

*Answer* 3. (a) While it is not always possible to attack such a fire from the leeward side it is best to do so provided the men are not required to take unnecessary punishment. Where the heat on the leeward side is too intense then the attack is best made from the sides of the fire on the leeward end.

For killing the main body of the fire large streams are essential, while for wetting down and "getting" the fire within piles of lumber the small stream is the more effective. It is also more mobile.

The ideal method of handling a lumber fire if it has not gained proportions is to employ one or more heavy streams on the fire and directly ahead of it. These large lines should be well manned so that they may be moved promptly as occasion demands. Following in the direction of the fire should be smaller streams for wetting down. These streams may be lighter manned and there should be sufficient of them to prevent any rekindling of the fire and also to quickly wet down any small fires which are starting in neighboring piles.

It is sometimes necessary to tip the piles of lumber over in order to kill the remaining fire.

In handling several lumber pile fires at the same time the same plans apply, but precaution should be taken against further spread of fire by embers. Men working in close to fire should be on the alert to prevent being cut off by fire spreading around them.

(b) First, the hazards in connection with fighting fires in oil refining establishments are as follows: Possibility of stills exploding; possibility of vapors igniting; of the tanks boiling over, of stills and tanks opening up; release of burning oil; rupture of overhead pipe lines and release of fluids therein.

The above are the hazards to be expected, and the dangers in connection with the above are those which should be apprehended.

Men operating around oil establishments must be forever on the alert for tanks or other oil containers letting go. In the case of highly volatile inflammables, the additional hazard of explosion

due to ignition of vapor from these fluids is ever present and must be guarded against.

Men must direct streams as not to get water into open oil containers. If the oil is burning, streams directed into tank may make it boil over, or the water entering the tank may so raise the oil level as to cause it to overflow.

The general procedure in handling fires in oil properties is as follows:

First locate superintendent of plant or some other official who is familiar with the piping of the plant. If fire is in the still house, ventilate thoroughly before operating therein.

Utilize any special extinguishing appliance or apparatus available in the plant such as foam apparatus, steam extinguishing apparatus, etc.

Keep exposed tanks cool by wetting down. Keep water out of tanks whether oil is burning or not, for water settles to bottom of tanks and causes oil to overflow.

See that dikes are intact so that in the event that tank gives way oil will not escape and carry fire throughout the plant.

Where the oil in the tank is afire and it cannot be drained off nor the fire extinguished, the only thing to do is to keep the tank cooled by the use of streams, permitting the oil fire to burn itself out.

Precautions must always be taken to prevent burning oil from entering sewers, streams, or water adjacent to shipping or piers. If burning oil in quantity reaches the river it should be either broken up with streams or else encircled and held at one point until it has burned itself out.

(c) By tar factory it is not clearly understood the type of establishment you refer to. It will, however, be assumed that a plant utilizing tar in the manufacture of its products is here considered. In this event the chief hazard is due to the presence of large quantities of tar which when ignited give off tremendous heat and dense smoke.

In handling tar fires the procedure is very much the same as in operating at oil fires with the exception that the tar is not as highly volatile nor inflammable as is lighter petroleum oils.

Care should be taken to keep water streams out of vats containing burning tar, for such streams will cause the tar to boil over, and the burning tar will carry fire over large areas by flowing. Keep vats or tanks filled with tar and not involved well wet down with streams. Tar will stand considerable heat before igniting, but constant attention at a tar fire is necessary due to the presence of high temperatures to prevent tanks from overheating and igniting.

Thorough ventilation is necessary to make it possible for the men to operate around the plant, provided the fire is burning within a building. Liberal quantities of water should be used for wetting down, but, as noted above, care should be taken that streams do not enter a tank containing burning tar.

## Answer to Query on Tire Chains

The question on putting on tire chains submitted by Capt. Titus in the January 10 issue of *Fire Engineering* has also been answered by A. O. McN. of San Antonio, Tex., who supplies the illustration on the snap device which he described.

The mechanism in the center presses down to receive a short length of chain. One end of the chain is fastened on the outside snap and the chain is passed under the wheel and fastened on the inside snap. The writer states that he has little difficulty in attaching the chains by himself in a few minutes.

## By-Passing Water in Pump

*To the Editor:*

I have read and studied your book "Simplified Fire Department Hydraulics." Kindly recommend to me a book along the same lines but more advanced.

Also, I would like detailed description of construction and operation of the types of pumps used on fire apparatus.

Questions like the following have come up in my mind: I am pumping from a hydrant having 40 pounds pressure and the time comes when this pressure or a little less will handle the fire. It does not just then seem advisable to disconnect the pump. In what different ways is the hydrant stream lead through the different pumps?

Is the resistance in the pump great at that time?

Will the hydrant pressure turn the rotors of some rotary gear pumps, or does the water have to be by-passed by churn valve or hydrant valves on the pump?

In order to maintain nearly the same pressure at the nozzle as the hydrant pressure would furnish, would it be better to turn the rotors of the rotary gear pump or in fact turn any pump over slowly?

I have asked you many questions and would highly appreciate your answers thereto.

Sincerely yours,

F. S. F., Suffield, Conn.

*Answer.* A good book on hydraulics which would probably answer your need, is that by Mansfield Merriman, entitled "Treatise on Hydraulics," and published by John Wiley & Son, New York.

As to the descriptions of the various types of pumps and their methods of operation, it is suggested that you get in touch with fire apparatus for literature on their pumps.

Relative to passing water through fire apparatus pumps without the apparatus turning over, this is possible in the case of positive displacement pumps (rotary gear and piston) by opening by-pass or turn valve. But water in passing through the pump mechanism in this manner is very much retarded and there is a pronounced drop in pressure due to friction loss. It is not a practical method of getting water from hydrant to hose line. It is far better to remove the pump entirely, taking the time necessary to do so, and hook the line directly to hydrant.

In the case of the centrifugal pump the water will pass from suction to discharge side without by-pass, but the flow will be severely retarded. As there is no churn valve on the centrifugal pump water will continue from the hydrant through the pump after the pump is stopped, provided the discharge valve remains open.

If the churn valve on the rotary pump is not opened, and if the pump is disconnected from the engine, it is possible that the hydrant pressure will be sufficient to turn the pump over though the loss in pressure will be very great.

If the lines of hose are to remain in operation and pressure no greater than that at the hydrant is required it is nevertheless best to continue having the pump turn over slowly to furnish the supply necessary and also to boost the pressure where increase is desired.

## Permitting Smoking in Theatres

*To the Editor:*

Will you be kind enough to inform me through FIRE ENGINEERING, under what conditions smoking is permitted in theatres; open flame or the throwing of lighted cigarettes or cigars is prohibited, and we must start smoking by lighting a match. Is it up to the manager, or has the fireman detailed to a theatre of 300 or more people got any jurisdiction over such a condition in case of fire. That section of Rules reads: "Carpenter Shop and Auditorium."

Does it mean under the auditoriums or the auditoriums proper where spectators are seated?

Thanking you, I beg to remain,

Respectfully yours,

D. D. J.

*Answer.* Your question was referred to Chief John Kenlon, head of the New York Fire Department, and his answer is as follows:

"Although the inquiry submitted by 'D. D. J.' to the Managing Editor of FIRE ENGINEERING is somewhat ambiguous, in that it opens with: 'inform me under what conditions smoking is permitted in theatres,' and further on asks: 'is it up to the manager or is the fireman detailed to a theatre of 300 or more people, vested with jurisdiction over such a condition in case of fire?' I believe the extract below from Special Order No. 63, dated April 12, 1915, and the provisions of the Code of Ordinances, will furnish you and your inquirer with the desired information."

"Firemen detailed to theatres are advised that the regulations of the Fire Department strictly prohibit smoking in the property rooms, paint rooms, carpenter shops, scene docks, locker rooms, dressing rooms, engine and boiler rooms, and under the stage and auditoriums of theatres; also that the use of open flames, such as candles or alcohol lamps, is prohibited in theatres."

"Such detailed firemen are directed to notify any person found smoking or using open flames, that he is violating the Fire Department Regulation, and if such person persists in the violation, the fireman is to secure the name of such person and at once notify the manager of the theatre or his representative in charge."

"A report of all such violations, with a statement of the action taken, will be forwarded through regular channels, to the Chief of Department."

Section 8, Article 1, Chapter 3, Code of Ordinances:

"Their duty (the detailed firemen) shall be to guard against fire, to take charge and control and direct the employees of the place to which they may be detailed, in the extinguishment of any fire which may occur therein."

# COURSE OF INSTRUCTION IN FIRE PROTECTION

## AS GIVEN AT THE UNIVERSITY OF ILLINOIS

## FIRE PREVENTION AND BUILDING CONSTRUCTION

By RAYMOND T. NELSON,
Engineer, Western Actuarial Bureau, Chicago.

*THIS sixth installment of the University of Illinois Course in Fire Prevention continues the instructive article on the above subject, a matter of interest to all who are engaged in fighting fire, and one on which much of the work of fire prevention must depend. If the building involved in a fire is well constructed, the work of the firemen is greatly reduced. Mr Nelson's ideas are therefore of great interest and value to those engaged in fire extinguishment.*

### PROTECTION OF FLOOR OPENINGS

#### Enclosed Openings

This type of enclosure is suitable only for Floor openings in buildings of ordinary construction.

Enclosure should be of wood latch and plaster or matched flooring not less than 1 inch thick (⅞-inch dressed) with all openings into enclosure protected by automatic or self-closing doors of matched flooring not less than 1 inch thick (⅞-inch dressed) or by wire glass in stationary automatic, or self-closing metal frames.

Note: The above type of enclosure should not be used for elevators (except small dumb waiters) passing through more than one floor. (Plate 14.)

#### Enclosed Openings

Enclosure should be continuous from floor to floor and be constructed so as to meet the following minimum requirements:

Partitions: Partitions should be of Cement plaster on both sides of metal lath, not less than 2 inches thick, supported on iron frame; boiler iron properly riveted and framed; gypsum blocks, tile, or reinforced concrete, not less than 3 inches thick, or brick.

Openings: Openings into enclosure should be protected by wire glass in stationary, automatic or self-closing metal frames, or by automatic or self-closing door approved for the protection of openings in vertical shafts. (Plate 15.)

### PROTECTION OF FLOOR OPENINGS

#### Enclosed Openings

#### (Counter Balanced Elevator Doors)

Enclosure should be continuous from floor to floor and be constructed so as to meet the following minimum requirements:

Partitions: Partitions should be of Cement plaster on both sides of metal lath, not less than 2 inches thick, supported on iron frame; boiler iron properly riveted and framed; gypsum blocks, tile, or reinforced concrete, not less than 3 inches thick; or brick.

Counter Balanced Door Equipment: Only doors and hardware approved for the protection of openings in vertical shafts should be used.

Size: Openings should not exceed 8 feet in width and 10 feet in height.

Door should lap sides and bottom of opening at least 2 inches, and top, 3 inches.

Sills and Lintels: Should be standard.

Guides: Guides should be mounted on inner face of shaft wall at sides of opening and fastened by ½-inch through bolts and nuts at each end and spaced not more than 18 inches on centers. Bolt holes should be slotted and guide arranged so as to engage door in each side at least 1 inch with ½-inch clearance in each guide for lateral expansion.

Two inches should be allowed between units for clearance and expansion. (Plate 16.)

### OPENINGS NOT ENCLOSED

#### (Stair Trap)

Size: Door should be of sufficient size to overlap opening on all sides by not less than 1 inch.

Trap: Trap should be of matched flooring, not less than 2 inches thick (1¾ inches dressed), entirely covered with tin as required for approved fire doors.

In buildings of ordinary joist construction, door may be of matched flooring not less than 1 inch thick (⅞-inch dressed) covered with tin on under side. Tin should be securely fastened to woodwork, nail heads being covered by single lock joints. Covering should lap top side of trap.

Hinges: Hinges should be heavy wrought metal and bolted to the trap.

Stop: Stop, to prevent door being raised to a vertical line, should be wrought metal and bolted either to door or wall.

Door: Door should be arranged to close automatically. (Plate 17).

### OPENINGS NOT ENCLOSED

#### (Elevator Trap)

Size: Door should be of sufficient size to overlap opening on all sides by not less than one inch.

Trap: Door should be of matched flooring not less than 2 inches thick (1¾ inches dressed), entirely covered with tin as required for approved fire doors.

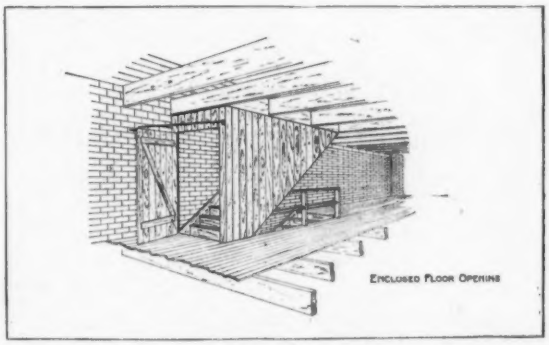



**Plate 14. Enclosed Floor Openings**

In buildings of ordinary joist construction, door may be of matched floor not less than one inch thick (⅞-inch dressed), covered with tin on under side. Tin should be securely fastened to woodwork, nail heads being covered by single lock joints. Coverng should lap top side.

Openings in door for cables, counter weights, etc., should be provided with automatic flaps of same construction as door.

Hinges: Hinges should be of heavy wrought metal and bolted to door.

Closing: All doors should close automatically by fusible link or electrical attachment, so arranged that all doors on one shaft will operate by the fusing of any one link or by thermostat.

All wires, chains, and pulleys and weights should be protected, if necessary, against mechanical injury, by guard strips, or from

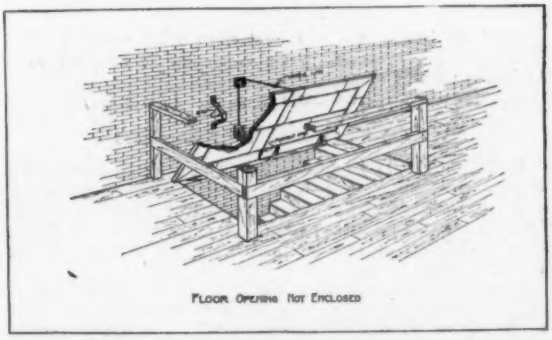



**Plate 17. Floor Opening, Not Enclosed**

being rendered inoperative by piling stocks or other materials against same. (Plate 18.)

### OPENINGS NOT ENCLOSED
### (Heating, Ventilating and Conveyor Pipes)

Sleeve: Sleeve through floor should be of cast iron or constructed of No. 14 gauge iron or steel and anchored by collar.

Door: Door should be constructed of same material as sleeve pivoted on bronze pin and held open with stranded wire or chain and fusible links. Weights should be attached to door to insure positive closing.

Painting: Apply two coats of paint. (Plate 19.)

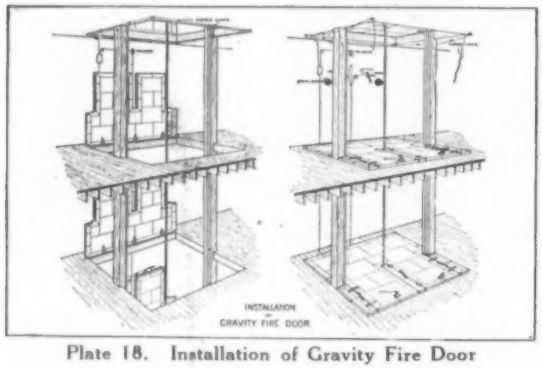



Plate 18. Installation of Gravity Fire Door

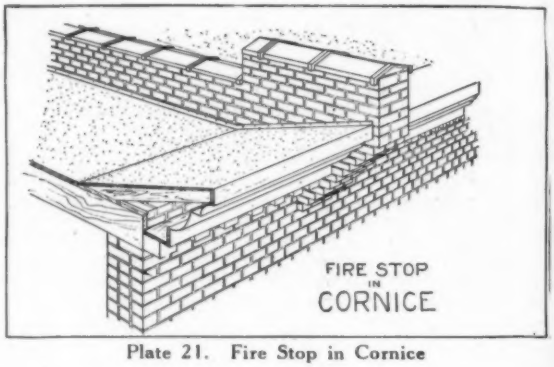



Plate 21. Fire Stop in Cornice

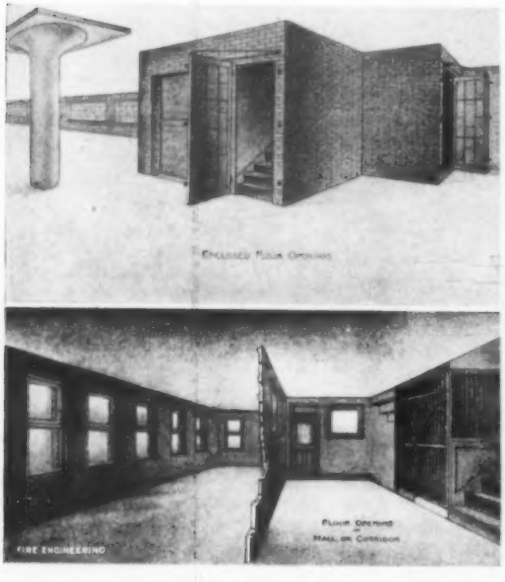


Plate 15. (Upper) Enclosed Floor Openings.
Plate 20. (Lower) Floor Openings in Hall or Corridor.

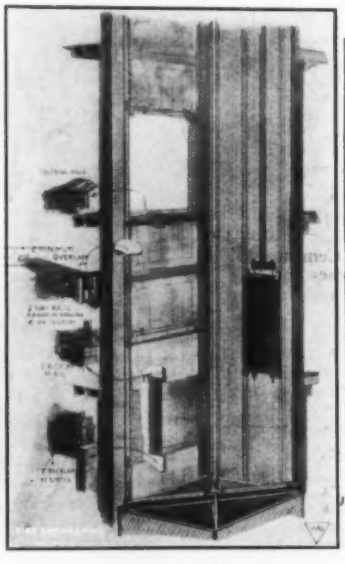


Plate 16. Installation of Counterbalanced Elevator Doors.

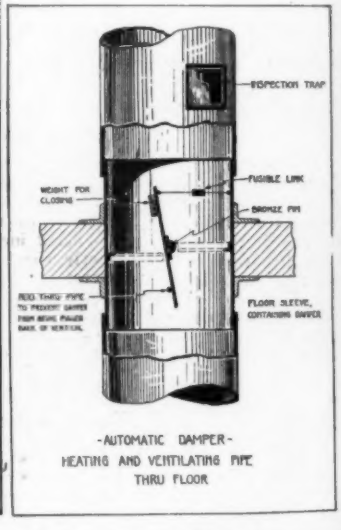



Plate 19. Automatic Damper-Heating and Ventilating Pipe Through Floor.

### Openings in Halls or Corridors

Enclosure should be continuous from floor to floor and constructed so as to meet the following minimum requirements:

Partitions should be of cement plaster on both sides of metal lath not less than 2 inches thick, supported on iron frame; gypsum blocks, tile or reinforced concrete, not less than 3 inches thick; or brick.

Openings into enclosures should be protected by wire-glass in stationary, automatic, or self-closing metal frames, or by automatic or self-closing doors approved for the protection of openings in corridors or partitions. (Plate 20.)

### EXTERIOR ATTACHMENTS

All exterior attachments to fireproof and brick buildings should be of incombustible construction.

Cornices: Cornices, if hollow, should not be continuous with adjoining buildings.

Bay Windows: Bay windows should conform to the requirements for exterior walls.

Walls: Walls of roof houses with floors and constituting more than 25% of the roof area or more than 800 square feet in area or, with or without floors and more than one story in height, should conform to the requirements for exterior walls. (Plate 21.)

## National Fire Waste Council to Meet

The regular Spring meeting of the National Fire Waste Council is to be held in Washington, D. C., on Friday, March 26. The session will open promptly at 10 a. m. in the headquarters of the council, at the offices of the Chamber of Commerce of the United States of America.

**New Ohio State Fire Marshal**—Fire Chief F. M. Bates, of Elyria, O., has been informed that he has been appointed assistant state fire marshal for that district, by State Fire Marshal Louis F. Miller.

**Toledo, O., Increases Firemen's Pay**—Legislation providing for a salary increase of 7½ per cent to members of the fire department in Toledo, O., pending final adjudication of their request for a 16⅔ per cent salary boost.

# BLOCK LOST IN BIG FIRE; WEATHER AT 28 BELOW ZERO

**Firemen of Sault Ste. Marie, Ont., Can., Fight Blaze in Severe Cold—Burnings of the Week**

WITH the thermometer registering 28 degrees below zero, the fire department of Sault Ste. Marie, Ont., Canada, was called out at 3 o'clock in the morning recently to combat a fire that completely gutted one business and residential block before it was brought under control. No advice is at hand as to the origin of the flames which caused a loss of approximately $40,000, and drove many half clad families into the icy streets. Captain Robert D. Clark, of No. 2 Fire Hall, slipped from the roof of a one-story building to the ground, breaking a leg and an arm. Three firemen narrowly escaped instant death when a brick wall crashed to the ground where they were holding a hose. One of the same firemen had a second narrow escape from death by falling through a hole in the icy stairs, being saved by two of his comrades.

It was 3:07 when the alarm rang in the engine quarters, and was responded to by twenty-five men. Nearly four thousand feet of hose was laid, and soon eight powerful streams were directed on the flames, which were rapidly gaining headway, licking up the woodwork and creeping from the building of origin to other adjoining structures. The building where the flames started was lined with tin, and made it difficult for the firemen to reach the

**Ice Incrusted Ruins of Big Sault Ste. Marie, Can., Fire.**

fire. "It was the dirtiest and most stubborn fire that we have ever had," remarked one of the firemen.

Chief W. J. Phillips of the local fire department, stuck stubbornly to his duty, although encased in a shell of ice that made it almost impossible for him to use his limbs. It was not until late in the morning when the flames had been fought to a standstill, that he took time to change his clothing and get a bite to eat. A large number of firemen and citizen helpers suffered frozen ears, feet and fingers. As is most always the case under similar circumstances, hot coffee had much to do with limbering up the firemen.

Chief Phillips writes that the building was a two-story brick veneered structure, fully thirty years old, with three stores on the ground floor, while the second floor was occupied by a number of families. It was heated throughout with stoves. Although nothing definite was learned about the origin of the flames, it is thought that they may have started under the stairway. That no more casualties were recorded is short of a miracle.

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**Newport, R. I., to Purchase Apparatus**—The board of aldermen of Newport, R. I., voted to purchase an American-LaFrance pumper.

**Victoria, B. C., Entertains Old-Time Members**—The veterans of the fire department at Victoria, B. C., were the guests of the members of the department at an entertainment held in the recreation hall. The firemen's band entertained.

## Three Alarm South Boston Fire

A remarkable stop of a dangerous fire was made recently by the companies of the Boston, Mass., Fire Department responding to three alarms from Box 711, corner of Summer and A Streets, South Boston.

The assignment of apparatus on this box is as follows: First alarm, Engine Companies 39, 38, 7, 25, 15, and 44 (fireboat); ladder companies 18 and 8, water tower 3, rescue company 1, district chiefs 3 and 5, and deputy chief of division 1. Second alarm, engines 26, 1, 3, 10, and 47 (fireboat); ladders 17 and 5, water tower 2, district chief 6. Third alarm, engines 6, 43, and 22; ladder 3, and deputy chief of division 2. The covering-in assignments on the second alarm are engine 6 to engine 25, engine 21 to engine 15, and ladder 13 to ladder 8. On the third alarm engine 12 moves to engine 3, engine 13 to engine 39, engine 46 to engine 43, engine 50 to engine 25, and ladder 12 to ladder 13. Two district chiefs shift locations on the second alarm and a deputy chief moves on the third alarm.

The first alarm was received at 12:52 a. m., second at 12:59, and third at 1:13. The fire was in the 5 story brick mercantile building at Nos. 332 to 340 Summer Street, South Boston. The blaze was burning briskly on the third floor and had shot up a rear stairway to the upper floors by the time the apparatus got to work. The entire building above the second floor was heavily charged with heat and smoke. Lines of hose were taken over the front stairway and over ladders in front of the building on Summer Street. From a lower level in an alley in the rear lines were taken to the upper floors over a rear fire escape and also over two aerial ladders. For a brief time in the first stage of the fire a wagon gun and water tower were operated on the Summer Street side of the building. Burned out gas meters affected a number of firemen working inside the building.

The principal occupants of the structure were W. H. Claflin & Co., dealers in book and wrapping paper, and Kistler, Lesh & Co., leather goods. The building is 5 stories above Summer Street with 2 stories below, so that it is in reality 7 stories high. Dense clouds of smoke billowed from the windows in the rear alley and the firemen took severe punishment in fight-

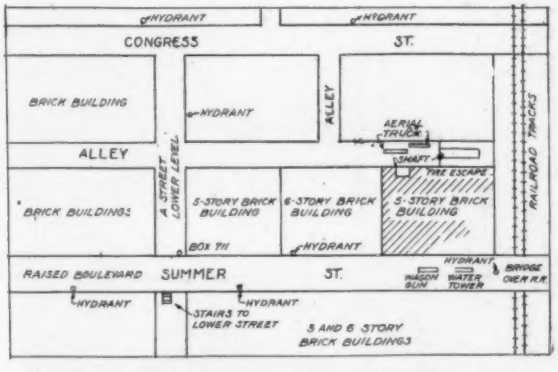


**Diagram Showing How South Boston Fire Was Fought**

ing the fire at close range on the fire escapes and inside the building. Fifteen firemen were more or less seriously affected by the smoke and gas. Among those overcome were District Chief Cornelius J. O'Brien, Capt. Florence Sullivan, of engine 7, and Hosemen Joseph Quinn and Dennis Sullivan, of engine 7. Hoseman John Dunbar, of engine 6, was cut by falling glass. District Chief O'Brien revived in the street and continued on duty as did Hoseman Sullivan, the others being taken to the Haymarket Square Relief Station.

The crews of engines 7, 38, 39, and 25 ran lines inside the building, while most of the companies arriving on the extra alarms were sent to the lower level to fight the flames from the alleys leading in to the rear from Congress and A Streets. The crews of the fireboats, which tied up at the Summer Street bridge in the Fort Point Channel two blocks away, aided the land companies.

Chief Daniel F. Sennott was in general charge of department operations, assisted by two deputy chiefs and three district chiefs. The men of the Boston Protective Department spread many covers on the lower floors under direction of Supt. Henry Thompson.

For a time it appeared as if the flames would sweep the entire building and burst through the roof, but efficient work

and a concentration of well directed streams soon brought the fire under control. Damages was estimated at $40,000.

There were three post hydrants available on Summer Street. Lines were also run from a hydrant on A Street and from two hydrants on Congress Street. Inch and a quarter nozzles were used on the mobile lines. The department laid 1,100 feet of 3-inch hose and 2,300 feet of 2½-inch hose. All of the hose used was cotton rubber lined. The hydrants were connected with a 12-inch main on Summer Street and with a 16-inch main on Congress Street. The pressure from the high service main was from 90 to 100 pounds and on the low service from 55 to 60 pounds. Atmospheric conditions caused the smoke to hang low in streets adjacent to the fire. Portable searchlights were set up in front of the building and hand storage battery lights were used in the alley at the rear. The "all out" signal was sounded at 3:22 a. m., but details of firemen with hydrant lines remained at the scene for some time longer to do overhauling.

HARRY BELKNAP.

## ASSISTANT FIRE CHIEF KILLED IN FIRE DESTROYING 12 BUILDINGS

**Blaze in Monessen, Pa., Results in Death of Officer of Assisting Department—Near Zero Temperature**

TWELVE buildings were destroyed and twenty families were driven to the streets in near-zero temperature and an assistant fire chief lost his life when fire swept an entire business block in the heart of the business district of Monessen, Pa., which is located on the Monongahela River about twenty-five miles south of Pittsburgh. The blaze started about four o'clock on the morning of January 23, from some unknown cause. Three firemen were injured, one of them fatally, and a woman and her son were rescued by firemen and police. Firemen battled the blaze in the intense cold weather for five hours before getting it under control.

Upper, Blaze Under Control which Destroyed 12 Buildings at Monessen, Pa. Center and Lower, the Ice-Covered Ruins, Showing Severe Winter Conditions Under which Fire was Fought.

Eight two-story frame structures in Schoonmaker Avenue, between Fifth and Sixth Streets were destroyed along with a four story brick apartment house, housing ten families, a garage and two frame dwelling houses. The second floors of the eight business houses were used as living apartments.

The destroyed buildings were occupied by the Alpha Grocery, Nayhouse's gents'. clothing store. Friedland's ladies' clothing store, Krieger's Paint and Hardware store, Rogawitz's clothing store, Wadnaski's ladies' clothing store, garage of A. Krieger containing two automobile trucks and a pleasure car, two frame dwellings and the four story brick apartment which were occupied as living apartments. The buildings damaged were the Reed & Skirfan real estate and insurance office, The Kiefer Garage and the new Grand Hotel.

A patrolman on his beat shortly before 4 o'clock in the morning discovered the fire burning fiercely in the rear of the Alpha Grocery. Drawing his revolver he fired several shots to arouse occupants of the second floor; he then ran to a nearby restaurant and turned in an alarm of fire, at the same time notifying two other patrolmen who were in the restaurant eating.

The three policemen hurried to the scene and started getting the residents aroused from their sleep and out of their homes.

Considerable difficulty was experienced in arousing some of the sleepers and before Mrs. George Codruces and her three year old son who resided above Cahn's shoe store, could be aroused their avenue of escape was cut off. They were both rescued by firemen and policemen and taken to places of safety.

The fire had much fuel at the start to feed on. Oil in the rear of the grocery store gave the flames a good start and by the time the firemen arrived in answer to the first alarm of fire, the fire had made great headway and was spreading to adjoining buildings.

After battling with the flames for about an hour it became evident that the local firemen would not be able to cope with the flames and calls were then sent to Charleroi and Donora, both towns which are just across the Monongahela River from Monessen. Charleroi responded to the call for assistance with two companies and Donora with one company. Even the augmented fire fighting force had a hard time in checking the flames, which were fanned by a brisk north wind, and it was almost nine o'clock in the morning before they were under control.

While the fire was at its height several barrels of paint in the garage and storehouse of A. Krieger, in the rear of his paint and hardware store, exploded.

Assistant Chief William E. Lowsteuter, of the Charleroi Fire Department was fatally injured during the progress of the fire. He was found several hours after the start of the fire at the foot of a 10 foot stairway in an alley between Schoonmaker and Donner Avenues. During the fire it is believed, he fell into the stairway when the alley was filled with smoke, and was not missed at the time. Later, when his fellow firemen found him his face was swollen to twice its normal size from the intense cold. He was taken at once to the Charleroi-Monessen Hospital in an unconscious condition where he died from a fracture of the skull about twenty-six hours after the start of the fire.

The funeral services of Assistant Chief Lowsteuter were held in the Methodist Church at Charleroi on January 26, a cortege of more than 100 automobiles forming the funeral procession. Business houses, banks, stores and offices closed their doors from 2 o'clock until 4 o'clock in the greatest tribute ever paid a resident of the Monongahela Valley. Members of the American Legion, accorded a military escort outside the church, and in the procession to the Monongahela Cemetery in Monongahela City.

W. E. PATTERSON.

## Northwest Arkansas Firemen's Association

Judging from the enthusiasm injected into the proceedings of the quarterly convention recently held at Bentonville by the Northwest Arkansas Firemen's Association, the organization is destined to play an important part in the future gatherings of fire departments in that part of the country. These officers have been elected for the ensuing year: W. P. Dean, of Fort Smith, re-elected president; Joe Morris, Eureka Springs, vice-president; F. W. Brock, Bentonville, secretary-treasurer. During the session all the principal business concerns closed their doors to give their employes an opportunity to attend. Following the welcoming address by Mayor Sam Beasley, several addresses on fire prevention and fire fighting were made. In the evening a very delectable banquet was served by the ladies of the School Improvement Association. On the invitation of Assistant Chief Joe Morris, of Eureka, that city was designated as the next meeting place of the association.

## WHAT'S BURNING

**From reports covering the United States and Canada, the estimated losses by fire during the week ending February 26, 1926, aggregated $6,971,250, as compared with $6,891,150 for the corresponding week in 1925. The total is derived by adding to the amount in the list given, which includes only those of $15,000 loss and over a sum equal to fifteen per cent of that amount, statistics showing that the smaller fires average about that proportion of the larger. Losses for the week ending March 5, follow in their right order.**

The figures published in this list, compiled from telegraphic reports of fires occurring during the weeks, are based on estimates made at the time, which are necessarily hurried and are subject to latter investigation and consequent correction. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

ROYAL OAK, MICH.—The Howarth Building..... 70
LIBERTY, N. C.—Plant of Liberty Chair Company and adjoining property..... 195
FORT WILLIAM, ONT.—Snelgrove-Waddington block destroyed 40
SAYERSVILLE, KY.—Five houses destroyed..... 15
NEW GLASGOW, NOVA SCOTIA—Matheson Foundries, Trenton road..... 20
TOMAHAWK, WISC.—St. Mary's Parochial School..... 35
SOUTH FALLSBURG, N. Y.—Several buildings destroyed.... 145
BUFFALO, N. Y.—Elk Street Market..... 20
KINGSTON, N. Y.—Kingston Hospital..... 145
EAST ST. LOUIS, ILL.—North wing of Arnold Hotel destroyed..... 125
EASTPORT, ME.—Packing plant of J. U. Beardsley & Son destroyed..... 45
PROVIDENCE, R. I.—City Hall Hardware Company, Washington street..... 70
OWEGO, N. Y.—Three business blocks..... 95
NEW ORLEANS, LA.—The Chalmette Petroleum Warehouse destroyed..... 45
BALTIMORE, MD.—Building at 409 St. Paul Place, owned by R. Kanter..... 15
LYNN, MASS.—Parker Building, 92 Market street..... 95
BROWNING, MONT.—Building owned by G. N. Noffsinger.... 15
RALEIGH, N. C.—Commercial Printing Company..... 95
SALEM, OHIO—Meat market destroyed, lunch room damaged.. 20
TORONTO, ONT.—Premises occupied by Universal Printers, Ltd..... 20
OLNEYVILLE, R. I.—B. W. Grossman Company, 43 Sycamore street..... 35
HIAWATHA, UTAH.—Building and stock of Blackhawk Mercantile Company..... 70
MILWAUKEE, WISC.—Prime Manufacturing Company, 653 Clinton street..... 15
LOUISVILLE, KY.—Howell Riding Academy..... 45
YONKERS, N. Y.—Building occupied by Yonkers Fur Dressing Company..... 110
SUMMERTON, S. C.—Shahdid Dry Goods Store..... 95
VALPARISO, IND.—Academy of Music Building..... 295
ELGIN, ILL.—Kerber Packing Company, 56 Grove avenue.... 45
CATLETTSBURG, KY.—Nu Grape Bottling Company destroyed 15
LOUISVILLE, KY.—Home Economies Building of University of Louisville..... 15
FALL RIVER, MASS.—Store of Dondis & Solotist..... 70
NEWARK, N. J.—Carlton Clothing Store..... 15
SOUTH FORK, PENNA.—Four business houses and dwellings. 15
AMBLER, PENNA.—Forrest Avenue Public School destroyed.. 95
PITSTON, PENNA.—Cornwall Coal Washery destroyed..... 295
HOUSTON, TEXAS—Houston Sash & Door Company..... 100
ORLANDO, FLA—Orlando Potteries..... 95
EVELETH, MINN.—Building occupied by People's Hardware & F. Company..... 15
STRATFORD, CONN.—Anderson Home, Maple street, destroyed 15
EVANSVILLE, IND.—Plant No. 4 of Standard Brick Company 50
CUYLERVILLE, N. Y.—General Store of Peter O'Zimmo destroyed..... 15
NEWPORT, VT.—Business block owned by Green Brothers.... 70
HOLBROOK, ARIZ.—Property of Standard Lumber Company, (south)..... 45
WEST HAMLIN, W. VA.—Two stores and two residents..... 45
PELHAM, N. Y.—Bloom Building..... 45
JAMESTOWN, N. Y.—Warehouse owned by Rosen Brothers.... 45
MIAMI, FLA.—Lumber yard and adjoining property in business section..... 490
PERKASIE, PENNA.—Garage of Herbert Muth destroyed.... 45
LA FAYETTE, ILL.—Two general stores destroyed..... 45
LAGRANGE, IND.—Property of Tyke Milling Company destroyed..... 30
CLINTON, MASS.—Morris Poriskey Block, Mechanic street.... 50
CANALOU, MO.—Pioneer Cooperage Company destroyed..... 35
AUDUBON, PA.—Store and dwelling partly destroyed..... 70
ST. LEONARD OF ACTION, QUEBEC—Residence and store of P. Beliveau..... 20
BOSTON, MASS.—Babcock Coffee House, 177 Washington street..... 15
KAMSACK, SASK.—Miles Block destroyed, also adjoining property..... 70
BRONX, N. Y.—Northfield Construction Company and adjoining property..... 50
DAYTON, OREG.—Home department store and adjoining buildings..... 790
E. ST. LOUIS, MO.—Shatzman & Silberman Wholesale Grocery 60
VISALIA, CALIF.—Plant of Visalia Meat Company destroyed. 25
COUNCIL BLUFFS, IOWA—Property of Trans-Mississippi Grain Company..... 590
PONTOTOC, MISS.—Salmong & Wilson Building and adjoining property..... 70
NORTH ROCHESTER, PA.—St. Anthony's Catholic Church... 15
PLYMOUTH, PENNA.—Two business establishments on East Main street..... 75
PHILADELPHIA, PA.—Warehouse of A. & P. Tea Company.. 70
HARVEY'S LAKE, PA.—Three cottages on State road destroyed 15
SCHOOLFIELD, VA.—Two dwellings and two stores..... 15
PLATTSBURGH, N. Y.—O'Brien Building destroyed..... 295
NIAGARA FALLS, N. Y.—Property of Wright & Kremers Company..... 35
NEW BRITAIN, CONN.—Specialty Shop at 408 Main street.. 20
MACON, GA.—Plant of Southern Cotton Oil Company, Waterville road..... 15
BEREA, KY.—Berea College Brook Factory..... 20
HANOVER, N. H.—Allen's Drug Store..... 30
SYRACUSE, N. Y.—Nottingham Building..... 70

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**From reports covering the United States and Canada, the estimated losses by fire in the week ended March 5, 1926, aggregated $11,344,750, as compared with $9,296,600 for the corresponding week in 1925:**

NIAGARA FALLS, N. Y.—Wicker Lumber Company Mill.... 20
NAUGATUCK, CONN.—Two-story and office building destroyed 70
CHICAGO, ILL.—Four-story brick building destroyed..... 70
NEW CANAAN, CONN.—Home of Mrs. Lewis P. Child..... 95
PHILADELPHIA, PA.—Parkway Baking Company..... 95
ANCHOR, ILL.—Several business buildings destroyed..... 25
GREENSBURG, IND.—Postoffice and several adjoining buildings..... 15
FORT DODGE, IOWA.—Iowa Cloak Store, 624 Central avenue 15
SALEM, KY.—Five buildings destroyed..... 35
DASSEL, MINN.—Three business establishments..... 25
MOBERLY, MO.—Starkey-Cooper Company Garage..... 15
BUFFALO, N. Y.—Four buildings at Williams & Watson streets 95
CLEVELAND, OHIO—Warehouse of Panoleum Products Company..... 15
WILKES-BARRE, PA.—Building owned by Decker & McLean Hardware Company..... 195
CHELSEA, QUE.—Hotel and adjoining property..... 15
NORTH DALLAS, TEXAS.—Apartment building, 2309 Flora street..... 15
KINGS MOUNTAIN, N. C.—Property of Elmer Lumber Company..... 15
DILLON, S. C.—Blum & Korblut Department Store..... 20
PITTSBURGH, PA.—McKeesport Tinplate Company, Port Vue, destroyed..... 120
POMPTON PLAINS, N. J.—Bungalow of Milton F. Untermeyer destroyed..... 145
RENFREW, ONT.—Buildings on Dominion Hotel property owned by M. J. O'Brien destroyed..... 35
FORT WILLIAM, ONT.—Beaver Block on Victoria avenue.... 90
BUFFALO, N. Y.—Temporary quarters of Marine Trust Company destroyed..... 15
BATAVIA, N. Y.—Jerome Clark mansion..... 15
CORNISH, N. H.—Residence of Wm. E. Beaman destroyed..... 145
LITTLE ROCK, ARK.—Property of Buckeye Cotton Oil Company..... 995
SYCAMORE, ILL.—Central Grade School Building destroyed.. 15
QUINCY, ILL.—Home of D. E. Richardson..... 15
BELVIDERE, ILL.—Leitzel Store, Fuller Block..... 15
STANFORD, KY.—Four business establishments in Elmore Block..... 20
MARYVILLE, MO.—Main building of Nodaway County Farm destroyed..... 30
MONTREAL, QUE., CANADA.—Business establishments at 10 and 18 Debresoles street..... 195

(*Continued on page 263*)

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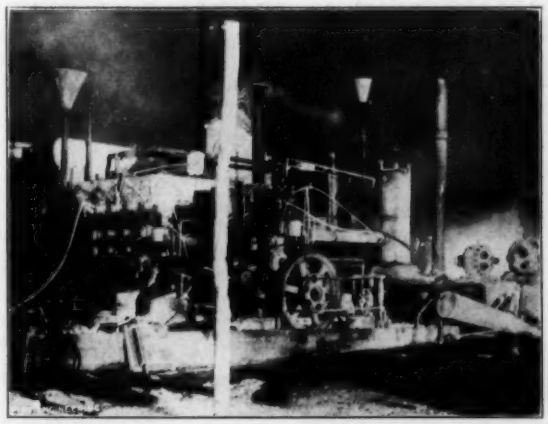


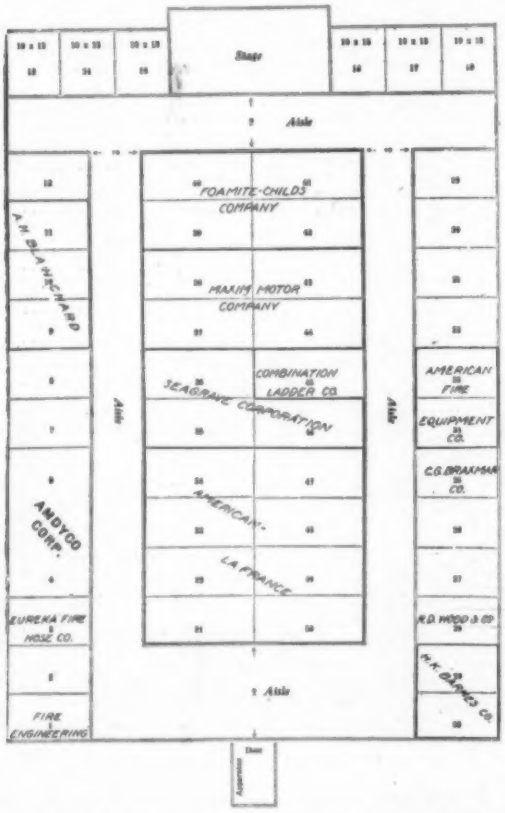
**Water Works Power Plant Wrecked by Fire**

In a recent fire which destroyed a large part of the summer resort of Ocean City, Md., the water works plant was among the sufferers. The illustration shows the remains of the water works power plant after the blaze, with the walls burned away and the machinery a mass of twisted iron and steel. Two frame hotels and some twenty dwellings were burned. The fire-fighters were hampered by frozen mains and a 40-mile gale blowing in from the ocean. The loss was estimated at $350,000.

## NEW ENGLAND EXHIBIT SPACE BEING TAKEN UP RAPIDLY

**Chairman Heitman, of Exhibit Committee, Reports lively Demand from Manufacturers—Well Arranged Exhibit Hall Suited for Display**

JUDGING from the report of Chief Henry H. Heitman, Waterbury, Conn., chairman of the Exhibit Committee of the New England Association of Fire Chiefs, the spaces in the exhibit hall of the fourth annual convention will soon be all taken up and it will be well for manufacturers intending, who




have not already done so, to at once secure their space before all are sold. The exhibits are to be displayed in the Armory Building, Manchester, N. H., the convention opening on June 22 and concluding on June 24. The exhibit hall is to be open during this period from 9 a. m. to 10 p. m.

The accompanying diagram shows the space arrangement of the exhibit hall, with the spaces already sold designated by the name of the exhibitor in each case.

## A View on the Insurance Tax for Pensions

A communication has been received from Curtis C. Johnson, assistant chief of the fire department at Emporia, Kans., in which he outlines the drawbacks against the successful operation of the relief fund in second, third and fourth class cities in the state of Kansas.

Under the present plan of operation these cities receive from $100 to $1,500 for their relief fund. Many of them can dispose of the money as they see fit by the vote of the members of the association, and in some cases three months after they have received the money from the treasurer, there are no funds left. Some of the cities use the money to purchase apparatus and thus defeat the original intention of the tax.

A discussion at the state firemen's meeting has revealed the fact that some of the firemen do not know if their city receives any money for a relief fund. In one instance two men should be retired but no funds are available for the retirement of these men.

Chief Johnson states that he is in favor of a two per cent tax to be used only in support of a pension fund to retire the firemen when they have reached the necessary age and have the proper qualifications.

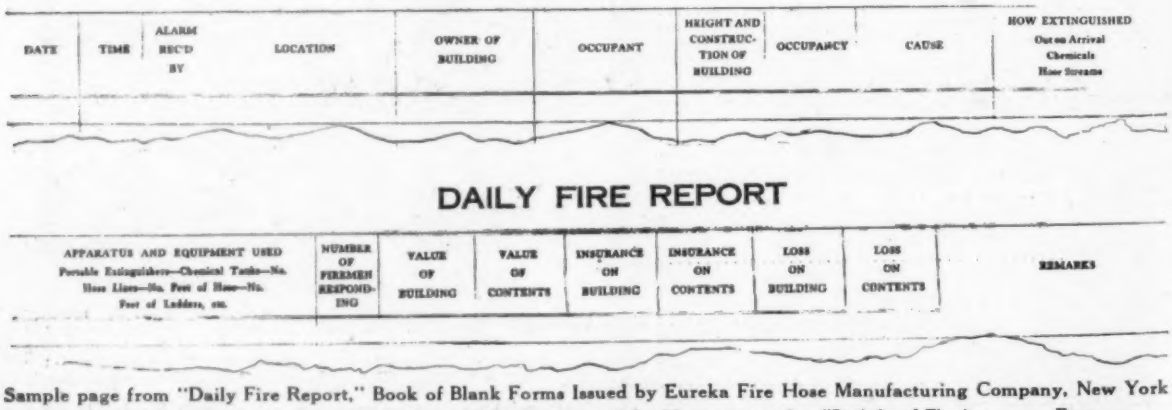
## Western N. Y. Plans for Convention

Plans are being made for the twenty-seventh annual convention of the Western New York Volunteer Firemen's Association which will be held in Kenmore on July 26–28. Arrangements are being made by Chief Edward W. Huebner of Kenmore, N. Y., chairman of the exhibits committee, for a display of fire apparatus and equipment during the convention.

There will be no charge for exhibit space but the convention committee will accept donations in order to defray the expense of the meeting. Because of the limited exhibition space, those interested are asked to communicate with the exhibits committee at once.

## Eureka Issues Fire Record Book

The Eureka Fire Hose Manufacturing Company, New York City, has just issued a book of "Daily Fire Reports," a sample page of which is reproduced herewith. This book is to be distributed free to fire companies. The blanks are made up in standard form and will prove of great help in keeping the record of the fire departments in up-to-date condition.



DAILY FIRE REPORT

| DATE | TIME | ALARM REC'D BY | LOCATION | OWNER OF BUILDING | OCCUPANT | HEIGHT AND CONSTRUCTION OF BUILDING | OCCUPANCY | CAUSE | HOW EXTINGUISHED Out on Arrival Chemicals Hose Streams |
|---|---|---|---|---|---|---|---|---|---|

DAILY FIRE REPORT

| APPARATUS AND EQUIPMENT USED Portable Extinguishers—Chemical Tanks—No. Hose Lines—No. Feet of Hose—No. Feet of Ladders, etc. | NUMBER OF FIREMEN RESPONDING | VALUE OF BUILDING | VALUE OF CONTENTS | INSURANCE ON BUILDING | INSURANCE ON CONTENTS | LOSS ON BUILDING | LOSS ON CONTENTS | REMARKS |
|---|---|---|---|---|---|---|---|---|

Sample page from "Daily Fire Report," Book of Blank Forms Issued by Eureka Fire Hose Manufacturing Company, New York

Book is 12½x10¼ inches, printed on heavy bond paper, with board covers and the title on cover reads: "Statistics of Fire in ——— From ———, 19— to ———, 19—" with place for signature of Chief of Fire Department.

# AMAZING GROWTH

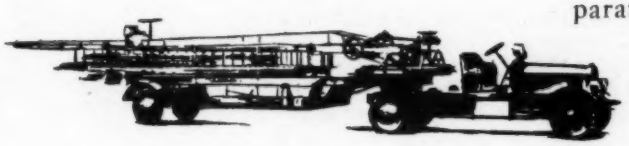
## *of the Seagrave Corp., over a 21 Year Period*

1904

1909

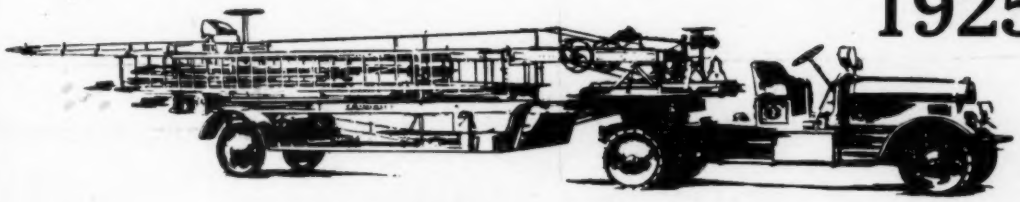
1914

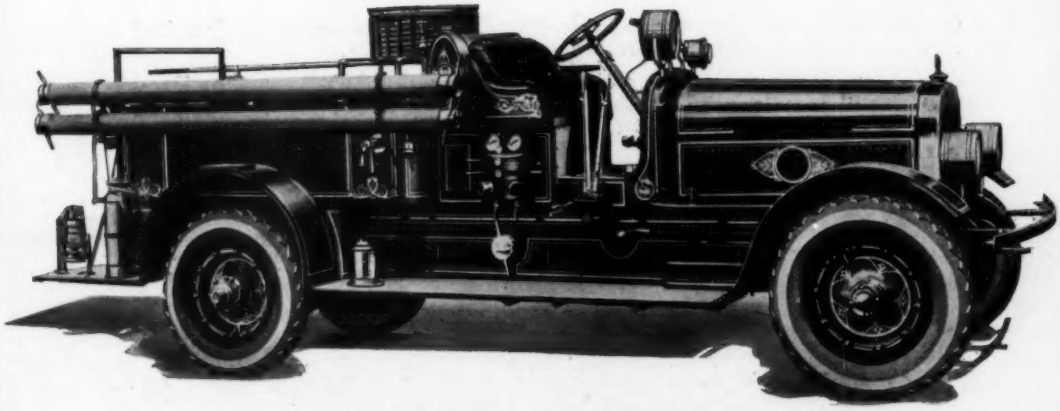
Mushroom-like, the Seagrave Corporation has sprung to its present dominating position in the manufacturing of Fire Fighting Equipment. Not only does such growth prove the genuine quality of Seagrave Equipment, but is indicative of the widespread preference for Seagrave apparatus.



1919

1925





*Let Your Next One Be A Seagrave*

## THE SEAGRAVE CORPORATION

**Columbus, Ohio, and Branch Offices at**

Boston, Mass. New Haven, Conn. Philadelphia, Pa. Chicago, Ill. Dallas, Texas Seattle, Wash. Kansas City, Mo. Pittsburgh, Pa. Birmingham, Ala. Los Angeles, Calif. San Francisco, Calif.

# *Beat the Fire to it with an* **Erick Electric Siren**

For **Volunteer Fire Departments** in towns of from 300 to 5,000 population, there isn't a Siren or a system in the world to equal the Erick. Night and day—year in and year out—it offers best protection to lives and property.

## *30 Days Free Trial in Your Own Town*

That's our method of proving the Erick Electric Siren to be the fire alarm you need in your town. Place it side by side with the best of all other sirens for 30 days and then be your own judge—decide for yourself whether you want to keep it or not.

"When fire is discovered, call Central from nearest phone."

"The Erick Electric Siren Shrieks its call of danger to every nook and corner of your town—quick, sure and dependable."

"Central presses button connected to Siren."

The Erick is the only Siren using one big whistle on a powerful 3 and 5 h.p. motor which throws its sound evenly in all directions—louder and more penetratingly than all others. Many special features including special designed hood and screen that protects siren from rain, storm, and nesting birds.

*Write for full information and details of liberal 30 Day Free Trial Offer*

**ERICK ELECTRIC SIREN CO., INC.**
95 South Wabasha Street
ST. PAUL, MINN.



# Selden Trucks

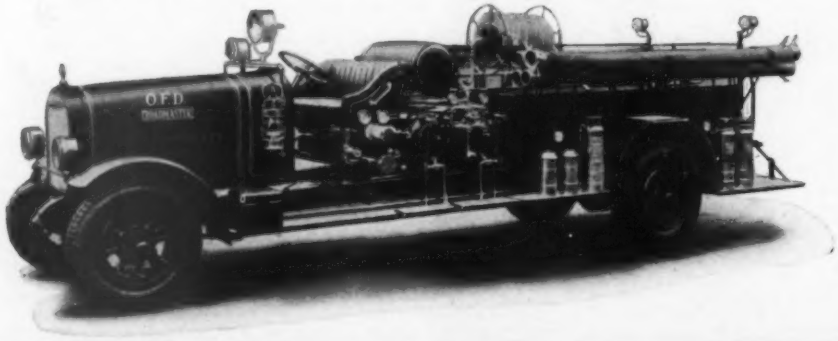
## PACEMAKER and ROADMASTER

**Chasses with 6-cylinder motors and 4-speed transmissions are ideally suited to the installation of triple combination fire apparatus.**

**Any make of fire equipment can be installed on these chasses. The Pacemaker will handle a 350 gallon pump and the ROADMASTER can be equipped with three sizes of motors to pump from 500 to 750 gallons per minute.**

***Special Proposition on Chasses to Fire Apparatus Manufacturers***

**SELDEN TRUCK CORPORATION, ROCHESTER, N. Y.**



# FIRE DEPARTMENT ACTIVITIES

**New Station for Washington, Ia.**—Construction has started on the new brick fire station for Washington, Ia.

**New Chief for Richmond, Ill.**—William G. Sandgren has been chosen chief of the fire department at Richmond, Ill.

**Buildings Condemned in Bloomington, Ind.**—Following an inspection of Bloomington, Ind., by a deputy fire marshal, several buildings in the city have been condemned.

**East Orange, N. J., Fire Losses Increase**—The 1925 fire losses of East Orange, N. J., show an increase of $20,000 over that of the year previous. The total loss for 1925 was $100,066.

**Seneca Falls, N. Y., Host to Chiefs**—Many chiefs from nearby cities attended the banquet given by the Seneca Falls, N. Y., fire department.

**Schuylerville, N. Y., Chief Resigns**—Joseph S. Glass has been appointed chief to fill the vacancy caused by the resignation of J. Harry Fake.

**West Union, Ia., Purchases Fire Apparatus**—The city council of West Union, Ia., at a recent meeting, ordered a Stoughton fire apparatus; the price was $4,900.

**W. Carthage, N. Y., Department to Observe Birthday**—Plans are being made to celebrate the thirtieth anniversary of the organization of the fire department in Carthage, N. Y.

**Baroda, Mich., Buys Chemical Combination**—A 250-gallon chemical combination has been bought by the village of Baroda, Mich., which is organizing a volunteer fire department. The question of water supply is now to be taken up.

**Boise, Ida., Firemen to Celebrate Anniversary**—The fiftieth anniversary of the fire department of Boise, Ida., was celebrated February 19 by the members of the Volunteer Firemen's Association and the city fire department.

**Bellefonte, Pa., Considers Firemen's Compensation**—Bellefonte, Pa., is considering compensation insurance for the volunteer firemen. Plans are being considered for the installations of a fire alarm system.

**Salary Raise at Atlanta, Ga., Valid**—Judge W. D. Ellis has ruled that the recent increase in firemen's pay at Atlanta, Ga., is valid. The increase amounts to $35 per month. The city will appeal to higher courts.

**Great Neck, L. I., Presented with Patrol Truck**—Vigilant hook and ladder company, of Great Neck, L. I., N. Y., is to be presented with a Waterous fire patrol truck, equipped with booster pump and hose.

**Warren, O., Firemen Injured by Hose**—Two members of the Warren, Ohio, department, while fighting a fire, were injured when the hose line broke. One received a broken limb and one internal injuries.

**Allegheny County, Pa., Firemen to Meet in July**—The Allegheny County Firemen's Association of Pennsylvania will hold their annual convention in Brackenridge during the week of July 5. It is estimated that about 5,000 will attend the opening of the meeting.

**Columbia, Ind., Chief and Men Resign**—Chief Miller and twelve members of the volunteer fire department tendered their resignations as the result of the chief not being consulted in making changes in the department. The mayor is attempting to reorganize the department with the three members that are left.

**Hellertown, Pa., Fire Station Must Be Cleared of Liquor**—The town council of Hellertown, Pa., at a recent meeting stated that there was too much liquor drinking in the fire station. The company in question was notified that the sale of liquor in the fire station must stop.

**Martins Ferry, O., Want New Ladder Truck**—The city council of Martins Ferry, Ohio, have been petitioned for the purchase of a new ladder truck. The firemen state that the present apparatus is in such condition that the lives of the men are endangered.

**Middleboro, Mass., Firemen Ask Wage Raise**—Permanent firemen at the Central fire station in Middleboro, Mass., ask for an increase in pay. They want $26 per week for first year; $30 per week for second year; $34 for third; with $36 for lieutenants, and $38 for captains.

**Hancock, N. H., Reelects Engineers**—Chief Ernest L. Adams was reelected chief, Wendell D. Crowell and Charles A. Sheldon were reelected 1st and 2nd assistants respectively of the Hancock Fire Dept. at the annual meeting held January 5th. Chief Adams has been the head of the department since 1916.

**Seattle, Wash., to Increase Number of Chiefs**—The council of Seattle, Wash., granted the request of Chief George M. Mantor that the number of battalion chiefs be increased from four to five. The chief stated that the battalion chiefs are required to cover too large an area.

**Milford, Mass., Ex-Chief Tendered Dinner**—A testimonial dinner was tendered to former Chief Edward J. Burke and Mrs. Burke of Milford, Mass., in honor of their silver wedding anniversary. A chest of silver was presented to them in behalf of their many friends.

**Muscatine, Ia., to Have Two-Platoon System**—An ordinance has been drafted in Muscatine, Ia., for the formation of a two-platoon fire system to be established from the first of April. The two-platoon system was favored a year ago, but the city did not have the funds to establish the improvement. Chief Brown is advocating the appointment of five additional men.

**Phillipsburg, N. J., Unable to Select Chief**—The city commissioners of Phillipsburg, N. J., are having a difficult task of selecting a fire chief. They are duplicating the records of the past Democratic national convention held in New York City. The city commissioners after casting thirty-four ballots have been unable to come to any decision.

**Easton, Md., Auxiliary May Purchase Ambulance**—The women's auxiliary of the Easton, Md., fire department are considering the purchase of an ambulance to be used in case of large fires of conflagrations. The present plan includes the purchase of a motor car equipped with a stretcher, coffee wagon, food heater, clothing and first aid equipment.

**Rhodes Re-Elected at Media, Pa.**—Walter L. Rhodes has been re-elected president of the Media, Pa., fire department. The department has been conducting a drive for funds with which to buy apparatus. They have raised $11,000. Of this amount $6,000 was used in the purchase of a chemical apparatus. The remainder will be used in improving the old apparatus.

**Statistics of Lynn, Mass., Department**—The total fire loss in Lynn, Mass., for the year 1925, according to the annual report of Chief Edward E. Chase, was $453,796. The department answered 1,640 alarms of which 1,311 were for actual fires; 810 fires were extinguished by chemical streams. The greatest fire loss was $69,201.

**Wheatland, Ia., Has Loyal Firemen**—Wheatland, Ia., has a volunteer fire department that has been in existence for thirty-two years. There are 25 active members who are not only self-supporting, but buy their own fire apparatus. The members even pay annual dues for the privilege of protecting the property of the community.

**Frankfort, N. Y., Hose Company Celebrates**—The hose company of Frankfort, N. Y., celebrated its seventy-sixth anniversary. At the banquet, excerpts were read from the minute book which commenced on January 3, 1852. All fines then were paid in shillings and half shillings, and the one who took care of the fire house and supervised the ringing of the fire bell, received the large sum of two dollars a year.

## Fire Alarm Notes

**Correctionville, Ia., Purchases Siren**—An electric fire siren has been purchased by Correctionville, Ia.

**Pine Plains, N. Y., Installs Siren**—A 50 h.p. siren has been installed in Pine Plains, N. Y.

**Siren Installed in Perry, Ia.**—An electric fire alarm siren has been installed in Perry, Ia.

**L'Anse, Mich., to Install Fire Alarm**—Consideration is being given to a plan to install a fire alarm system in L'Anse, Mich., consisting of a siren and four fire alarm boxes.

**Miles, Ia., to Erect Fire Siren**—A platform has been built on the city hall in Miles, Ia., for the mounting of an electric fire siren.

**One Fire Alarm System Urged for Bethlehem, Pa.**—The consolidation of the two fire alarm systems of Bethlehem, Pa., is urged by Chief Anderson in his annual report submitted to the city council. At the present time the north and south sides of the city each have a system of their own and there is a duplication of fire alarm box numbers. By a centralization of the equipment, most of the confusion would be avoided.

# OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

## Inspection Plan Used in Small Town

A method of inspection of the fire hazards in a small town has been very effectively used by Chief George F. Dansbury in making the inspections in Grosse Pointe Farms, Mich.

Chief George F. Dansbury, Grosse Pointe Farms, Mich.

The inspector is instructed to enter the building at the main entrance or office and inquire for some one in authority. After introducing himself, he shows his badge, states his business and asks for permission to inspect the building. Under no circumstances is he allowed to demand that he be allowed to make the inspection. Furthermore, the inspector is not allowed to enter into an argument with the person in charge of the structure. The calls are made between the hours of 9 a. m. to 12 noon and between 1:30 to 4:30 p. m.

Should any hazards be discovered, an entry is made of the fact and reported to headquarters. The inspector is not permitted to enter into discussion concerning the findings of an inspection. Before leaving, the one making the survey is instructed to thank the person in authority for the courtesy extended in permitting an inspection to be made.

The findings are recorded on a card as illustrated and the card forwarded to the chief of the department. A notice is sent out by the chief to the property owner that the department is willing to cooperate in helping to remove or correct the hazard or any serious condition that may exist.

If the property owner shows no inclination to correct the defect within the time allowed, a second notice is sent—the latter notice is final. After three days receipt of the final notice, if the hazards are not corrected, a report is sent to the state fire marshal or the department cleans up the defect.

The department oils, flushes and inspects all the fire hydrants

| | |
|---|---|
| DATE INSPECTOR | STATION NO. |
| LOCATION | CHIMNEYS |
| OWNER | STOVES FURNACES STEAM |
| OCCUPANT | CONDITION |
| OCCUPIED AS | HOW LIGHTED |
| KIND OF BUILDING | OIL RAGS |
| ROOFING | WASTE PAPER |
| NO. STORIES | RUBBISH |
| SKYLIGHTS | ASHES |
| ACCESSIBILITY | EXPLOSIVES |
| STAIRWAYS | OILS |
| FIRE DOORS | HOW STORED |
| TRAP DOORS | ELECTRIC WIRES |
| FIRE ESCAPES | REMARKS |
| NO. LOCATION | |
| CONDITION | |
| EXTINGUISHERS | |

at least once a month and keeps the hydrants free from ice during the winter months. All minor repairs are attended to by the fire department and the major repairs are made by the water department.

## Chimney Fires

One of the commonest types of fires encountered in small communities is the chimney fire.

Due to the absence of ordinances covering inspection and cleaning of chimneys, they are permitted to become choked with soot and sooner or later fire occurs.

Also, due to absence of proper building regulations chimneys are frequently built in a careless manner so that cracks may later develop. If such cracks occur in the attic where fire can get out undetected there is a possibility of the building eventually taking fire.

The following information on chimney fires may prove of value to departments operating in small towns and suburban sections of cities.

Water should not be used to extinguish fire in a chimney flue, as it is liable to cause the chimney to burst or wall to crack; neither should a brick or such article which would be liable to get caught in the flue be used.

To properly extinguish fire that is in a chimney flue, all the openings to the flue that are below the room should first be closed up tightly so as to prevent the falling soot from flying about the rooms or premises and doing unnecessary damage. Then a bag of salt, a pail of small coal, or a pail of sand, or other similar substance should be dumped down the flue opening at the roof. Salt extinguishes a chimney fire quickly by chemical action, when it comes in contact with a fire; coal or sand will carry the soot down to the bottom of the flue where it may be removed.

Chemical powders, composed chiefly of bicarbonate of soda or similar salts are very good to extinguish fire in a chimney flue, by throwing a handful of the same into the opening at the bottom of the flue and then closing it to prevent the soot from falling or scattering about.

A handful of sulphur, lighted and placed in the stove or placed in the bottom of the flue that is on fire, will quickly extinguish the fire with the fumes that ascend from it.

Another good method of extinguishing a fire in a chimney flue where it is desired to remove the soot, is to secure a dozen pieces of chain 8 or 10 inches long with ½ or ¾-inch links, tied loosely together with wire; then attach to them a piece of the same kind of chain about 10 feet long and enough clothesline to reach from the top to the bottom of the flue. The bunch of chain should then be dropped down at the top of the flue and pulled up and down several times, after which the fire will have been extinguished and all of the soot will have dropped to the bottom.

All openings to the flue at the bottom and below the roof should be closed up tightly in this case, before dropping the chain, and not opened until the soot has settled, after which it should be removed gradually and carefully so as to prevent its flying about and causing unnecessary damage.

A good soot destroyer is formed of small coke with a little metallic zinc, impregnated with sodium nitrate, thrown in the fire grate. It will remove soot from the chimney, to some extent by burning, but chiefly by dislodging and blowing it out.

In the event that there is a fire place opening at the base of chimney, it should be covered over by a waterproof cover or other cover, if the waterproof cover is not available, to prevent the soot from being blown about the room when the chimney undergoes the process of cleaning.

These little precautions will save a lot of damage and will bring credit to the fire department.

## Assistant Chief, Savannah, has Anniversary

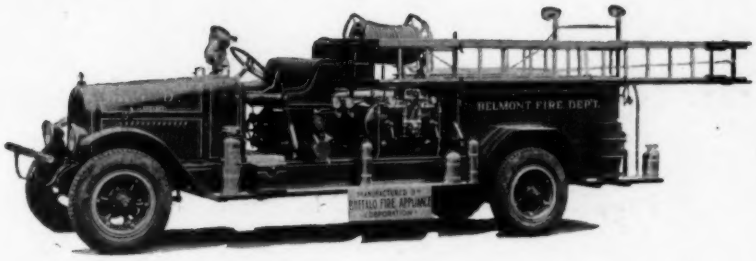
Thomas J. Fogarty, second assistant chief of the Savannah, Ga., fire department, celebrated the 35th anniversary of his connection with that organization, on Tuesday, February 2. Chief Fogarty entered the paid department as a private, driving the horse-drawn steamer of Engine Co. No. 1, on February 2, 1891. Several years later he was promoted to Captain of that company, and three years later transferred to Engine Co. No. 2, as captain. In 1913 he was made second assistant chief. Chief Fogarty was formerly a member of the old volunteer fire department.

JOHN A. STULB

**Nebraska Volunteer Firemen's Association**—At the recent annual meeting of the Nebraska State Firemen's Association Al W. Frischolz, of Columbus, was elected President. The convention, which was held at Alliance, selected Columbus as the next meeting place.

# BUFFALO

One of the strongest proofs of the real merit of Buffalo apparatus is the fact that chiefs are constantly of their own accord writing us glowing letters of praise of their Buffalo apparatus in actual service.



Every piece of Buffalo apparatus must be right before it leaves the plant—and every piece is fully guaranteed. You can't go wrong with Buffalo apparatus.

## "Built to *Your* Order" Apparatus

### is Making Good Wherever Placed in Service

because every piece of apparatus is designed by our experienced fire apparatus engineers in conjunction with the local fire officials to meet the specific requirement of the particular department or municipality making the purchase—and only the highest grade materials and workmanship go into the construction.

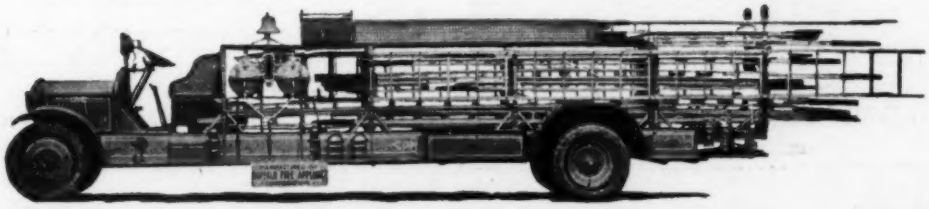
Every city, town or community selecting Buffalo apparatus is therefore certain to get dependable apparatus of just the type and size that will most effectively meet their own fire protection requirements.

Moreover, Buffalo Apparatus is economical. Our method of doing business and our large modern plant enable us to provide quality apparatus at comparatively low cost. This makes possible the immediate purchase of new apparatus with limited funds, or saves money that can be used to purchase other needed equipment or supplies.

*May We Tell You More About Buffalo Apparatus and the Buffalo Plan?*

**BUFFALO FIRE APPLIANCE CORP.**

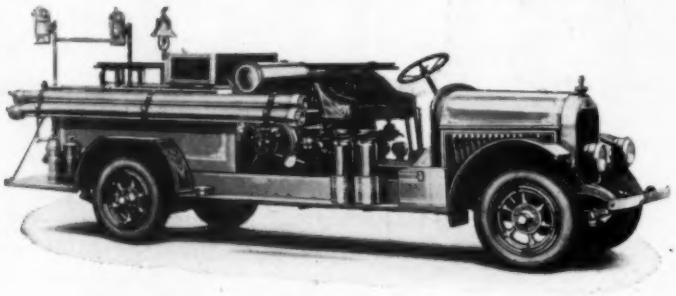
**General Office and Factory** **44 Central Ave., Buffalo, N. Y.**



# BUFFALO

# COSMOPOLITAN

## *A Speedy Fire Fighter*



Any smaller community can well be proud of the new Cosmopolitan as they see it speeding on its way to a fire.

It is really big city fire protection at a price that a smaller community can well afford to pay.

The low Brockway chassis insures roadability.

Its six cylinder motor permits quicker acceleration, brings more power and more speed. The American-LaFrance fire equipment with which it is mounted is built with the knowledge that can only belong to the world's largest and oldest manufacturers of fire apparatus.

We have illustrated literature describing the new Cosmopolitan in detail. Why not let us send it to you?

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# Two Books of Practical Value

## to every fire officer interested in up-to-date methods and equipment

### The New York Fire College Course

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Comprising an abstract of the advanced practical instruction in up-to-the-minute Fire-Fighting methods given officers of the N. Y. Fire Dept. Fire Chiefs in cities, large or small, are increasing the efficiency of their men by placing this valuable book in every station. And with its help, too, fire department officers and men, studying for promotion, are easily winning top marks at examinations.

**Explains in Clear Understandable Form—**

Fire department tools and the most effective way of using them. Proper way to raise ladders and place apparatus. Building inspection, including sketches of buildings and points to cover in fire prevention and inspection work. Dwelling fires, and how to handle them. Apartment house fires, and how to fight them. Tenement house fires, and how to fight them. Office building fires, in old and new buildings; how to place apparatus and how to handle fires. Overhauling at fires, and wetting down fires without excessive water damage. Chemicals meet with in fire service, and precautions to take. Chemical and electrical fires. Oil fires and varnish fires.

### What Every Fire Fighter Should Know

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Comprising a reprint of the famous series of articles which appeared in FIRE AND WATER ENGINEERING during 1921 and 1922, under the same title.

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Name.....Rank.....

Address..... .....Date.....

# Recent Patents

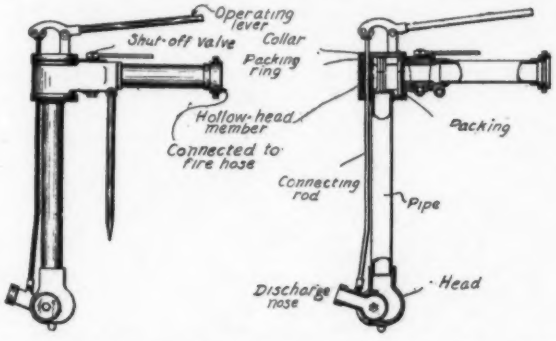
## Descriptions of Patents Recently Issued of Interest to Fire Department—Hose Nozzle—Frost-Proof Fire Extinguisher

### Hose Nozzle

The following is a description of a new design of a cellar nozzle, a patent for which was granted to (patent No. 1,550,884) John T. Corley of Providence, R. I.

The illustrations show both the complete device and a cross section of the invention taken along the vertical axis.

At one side of the hollow head member is connected a neck carrying a shut-off nozzle which is operated by a handle—be-




yond this member may be attached a short piece of pipe to which is attached a standard fire hose coupling—the fire hose is attached at this point.

In the outer cylindrical head member is mounted an inner head or cage which is provided with an upper wall and a lower wall connected by upright bars. The lower wall is provided with an extending flange which rests against a packing and a collar that is threaded onto the upper end of the cage. This may be adjusted to engage a packing ring whereby the cage may be rotated in the head while under pressure and sealed against leakage of water therefrom.

A pivoted operating handle is mounted on the upper head plate, and to the lower head plate there is connected a drop pipe which may be threaded into the lower plate. At the lower end of this pipe, there is connected a head in which is pivotally mounted a discharge nose through which the water is directed against the fire. The nozzle member is connected to the outer end of the operating lever by the connecting rod which extends through the tubular opening in the cage member. No packing box is required about the post to prevent it from leaking. The drop pipe may make a complete revolution without interfering with the operation of the connecting rod. By the use of the shut-off nozzle, the water may be turned off when desired.

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### Frost-Proof Fire Extinguisher

Ralph W. Austin, of Quincy, Mass., is the inventor (Patent No. 1,499,631) of the following improvements to the fire extinguisher, the main object of which is to provide a type employing liquid chemicals for the generation of a gas pressure for operating with a high efficiency at low temperatures.

The illustration shows a vertical cross section of the extinguisher design.

The average form of fire extinguisher operates by the gas which is generated from the mixture of bicarbonate of soda and sulphuric acid. These chemicals are kept separate until ready for use; in freezing weather, the bicarbonate of soda is precipitated from the solution. As the concentration of the liquid decreases, the liquid will soon freeze and become inoperative.

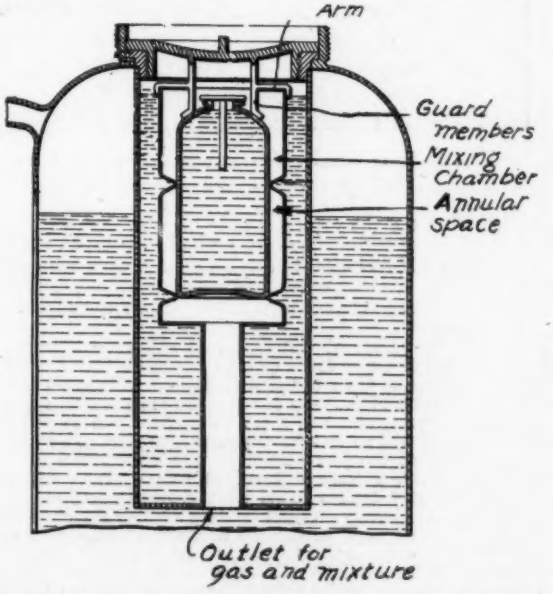
The inventor after numerous experiments decided to use potassium carbonate solution because its eutectic point is –36°C. The requirements of the National Board of Fire Underwriters for an A-1 extinguisher, is that it shall be capable of withstanding a temperature of –40°C and be able to develop sufficient pressure to throw a stream forty feet. For the other ingredient, potassium hydroxide with a eutectic point of –65°C was used. Sulphuric acid of 74.5% concentration was used to neutralize the potassium hydroxide and react with the potassium carbonate.

The fire extinguisher illustrated consists of a metal container of the usual shape with an opening in the top for the introduction of the chemical charge and a nozzle for the discharge of the same. The opening is closed by a metal cap.

The container is normally filled to the level as indicated which will comprise a solution of calcium chloride of sufficient concentration to withstand temperatures of –40°C. Inside of the shell is a container of brass as shown, and inside of this is another brass container which supports a receptacle in an upright position. This inner receptacle will contain the sulphuric acid and is supported by indentures projecting from the inner brass container, and which engages with similar indentures in the sulphuric acid container. This bottle is provided with the usual lead stopper to close the mouth of the bottle when it is held in an upright position. A shank is provided which extends into the mouth of the bottle to center the stopper.

The method of operation is as follows: When the extinguisher is inverted, the sulphuric acid and the solution in the inside container flow in the space about the bottle or mixing chamber. Here the solution is mixed and the gas is generated. The gas will flow upward and will leave the mixing chamber by way of the outlet provided for it as shown. The gas then generates a pressure on the liquid in the outer chamber and the liquid is forced out of the extinguisher. Because the acid is not mixed near the outlet, there is no danger of the acid being forced out of the nozzle.

According to the reaction of the chemicals, there is a large amount of heat generated which immediately raises the temperature of the reacting materials. This raises the rate of the




reaction between the acid and the carbonate and enables the extinguisher to operate immediately.

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### Desperately Ill, Dispatcher Sticks to Post

William S. Riordan, in charge of the night shift of the fire alarm telegraph bureau in the Seventy-Ninth street Transverse road through Central Park, New York city, was taken ill about midnight during one of the recent stormy nights, but refused to leave his post on the advice of friends, for fear that an alarm might come in. At 8 a. m. he collapsed at his key, and after being attended by Dr. Archer, honorary fire surgeon, was forced to leave his position and be carried in an ambulance to his home in Brooklyn, where it was found that he was suffering from intestinal trouble. At 1 a. m., just after being taken ill, Riordan received a flash indicating a fire at Fortieth street and First avenue, and sent in three alarms. Eight firmen were overcome at this fire. Riordan is forty years old and one of the oldest alarm dispatchers in point of service, in the city.

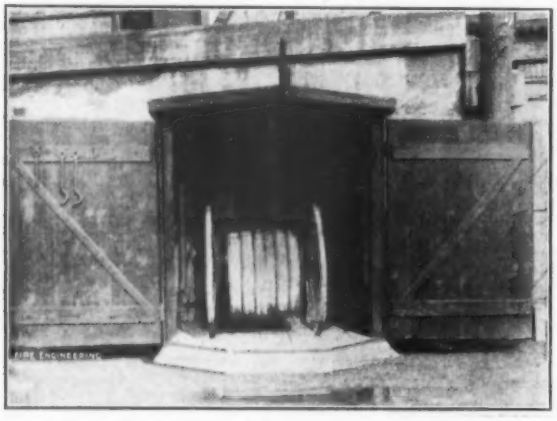
# INDUSTRIAL PLANT PROTECTION

## Protecting a Big Steel Works from Fire

By PHILIP J. HARTY
Chief of the Youngstown Sheet & Tube Company Fire Brigade

All industrial plants, regardless of size should for more than one reason safeguard themselves against fire. Each plant according to its size and nature should afford itself adequate facilities to cope with the incipient blaze so as to be able to hold it in check until the arrival of the municipal department if not extinguishing it entirely.

It is all very well to say "The City Department takes care of our fires," but what assurance have we that our fire will



Typical Hose House, Youngstown Sheet and Tube Company

happen when the city apparatus is in their respective stations? Might it not be that all the equipment and the whole force of fire fighters will be engaged in combating a conflagration in the center of our business district, which certainly would give us considerable time for reflection on our failure to provide private protection.

During the course of installation of private equipment the very best people that I know of who can be of the most assistance to one is the Ohio Inspection Bureau. These men trained in the protection of property can give the most practical advice, and are always willing and ready to convince you of your requirements as well as appreciate your suggestions. In my position as Chief of the Fire Brigade of the Youngstown Sheet & Tube Company, I have had considerable dealings with the Bureau and have always found them courteous and congenial.

Our company having its main holdings outside the corporation limits, early in its career, saw the necessity of an effective organization to care for fire hazards. Prior to the advent of James M. Woltz as Safety Director, fire hose and connections along with chemical extinguishers of that day had been provided and was looked after by the Police Department. Mr. Woltz very shortly after his arrival saw that the Police Department had enough to do without trying to keep up the fire equipment as it should be kept and fighting the fires of the various Departments, so he organized the "Fire Bureau" with a Chief in charge whom he instructed to get together a volunteer Fire Brigade from among the various employees of the different Departments and organize them into hose companies under the direction of a captain and lieutenant, and to drill them semi-monthly in the efficient use of the chemical equipment and laying of fire lines for which they were to be paid extra.

In the early days, the department call whistle was used to assemble the firemen. Keeping pace with the growth of the plant, however, has caused the installation of a Gamewell Fire Alarm System far surpassing many large municipalities for fire signaling.

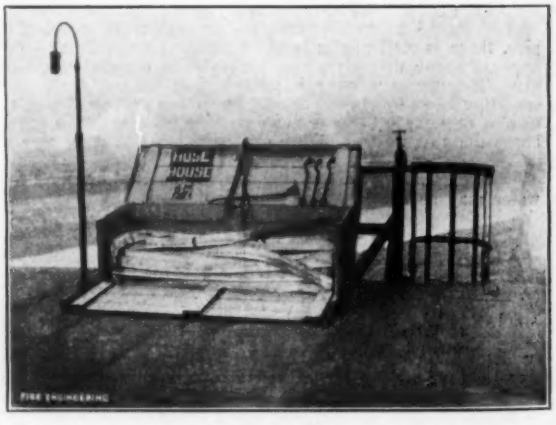
The Youngstown Plant is divided into ten zones each having its own alarm system, and calling only the volunteers of its own territory. Assistance from neighboring zones is summoned by the Operator at Headquarters on receipt of second alarm. The Brigade is divided into two divisions, The Youngstown Works and Brier Hill Plants of six battalions each. The Battalion Chief appointed from among the volunteers looks after the work of the Hose Companies in his District and assists in keeping them up to the full complement. The entire brigade consists of fifty-five hose companies and two salvage corps, in all 480 officers and men. This looks like a large force of fire fighters, but when we consider the miles of territory covered and the fact that this number is divided into three shifts it is not so large.

Each fire hazard is fortified with the proper fire fighting agents whether it be Carbon Tetrachloride (1 quart, 1 gallon Physter, 10 gallon Oceo) Soda and Acid (2½ gal., 5 gal., 20 gal., 40 gal.) Foamite (2½ gal., 40 gallon) or 2½" D. J. rubber lined hose (35,000) feet distributed in the various hose stations on the ground and on the roofs of buildings wherever practical. For roof stations we have risers from the ground (2½" iron pipe) running parallel with the safety back ladder. The riser is either attached permanently to the nozzle of a high pressure hydrant or located so that connection can easily be made with one or two sections of hose. This installation eliminates the dragging of hose to the roof when that is an advantageous point from which to fight the fire.

A high pressure fire line built in loops surrounds the East Youngstown Plant, and Coke Works, connected with two steam driven and one electrical pump of 1,000 G. P. M. and delivering water to the nozzle of the hydrant at 125 pounds pressure.

The upkeep of all this fire equipment is one of the principal concerns of the Fire Bureau, and it keeps six Inspectors busy recharging, inspecting, washing and testing hose, keeping everything in readiness so that when it is needed the equipment will function as originally intended when installed.

An American-LaFrance Combination No. 75 is located just outside the plant and upon second alarm responds to calls within the plant carrying rubber goods and extraordinary equipment to the fire fighters. Three drivers on 8-hour shifts look after the apparatus. This machine responds on first alarms to all fires outside the plant, (Camp Office, Laboratory, and Residential Dis-



Roof Hose House and Riser, Youngstown Sheet and Tube Company

tricts). This territory is Zone No. 8 on the Gamewell circuit and during the daytime is looked after by the Office Company, while during the night season "The Plant Company" comprised of residents of Loveland Farms respond. Each man on this Company has a six-inch turtle gong in his residence and is provided with "Night Rigging" so that in less than a minute he is on his way to the fire station close by.

The cooperation of municipal and private plant departments work to the advantage of both sides. The municipal departments feel more secure on entering a plant knowing they will meet trained men who are thoroughly familiar with the location of extra hazards and on whom they can rely for effective assistance.

***Six Essential Requirements of a Fire Hydrant***

1 Ample Water Supply.
2 Rugged Construction.
3 Non-Freezing.
4 Compression Valve—closing with the pressure.
5 Minimum Maintenance. All inside parts, including seats, removed through top of hydrant.
6 Adaptability to Installation Changes.

***What Does the Fire Chief Ask Himself When About to Buy Fire Hydrants?***

# Collision Proof ✓

The Fire Chief who has to keep a gang of men straightening or replacing hydrants that have been kissed by flivvers, knows the value of fire hydrants that are able to withstand the petting given them by a husky five-tonner playfully jumping the curb.

It is possible to break a Darling barrel—but it's so heavy and so substantial that it isn't often done. Even if the impact breaks the barrel, a Darling wouldn't cause a young flood. **It isn't built that way.**

The valve closes **with the pressure**—and operates in such a way that a bent stem only draws the valve tighter and prevents any escape of water.

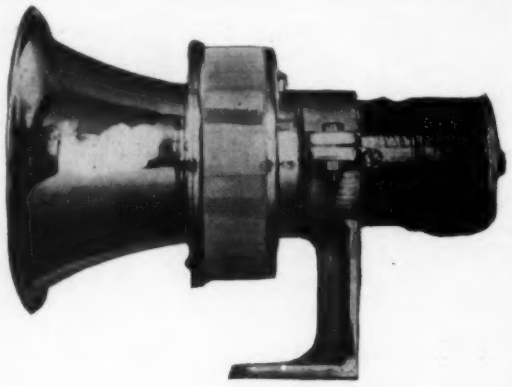
Catalog and detailed drawings showing the simple and compact construction of Darling Fire Hydrants will be sent upon request.

**DARLING VALVE & MANUFACTURING CO.**
**Williamsport, Pa.**

New York
Chicago
Oklahoma City
Houston

# DARLING
## FIRE HYDRANTS

# C. A. M. Sirens
## *are better sirens*



They are designed solely for emergency signalling and are unsurpassed for ruggedness of construction, simplicity and accessibility of parts.

They are built to give service and to endure.

Bronze is used where bronze serves best; likewise with other metals. C. A. M. Sirens may well be classed as aristocrats in the siren field. They are "quality" sirens.

If you are in the market for the best that can be built in the way of electric fire apparatus sirens, get in touch with us. Write for bulletins.

**C. A. M. Manufacturing Company**

802 Humboldt Bank Building San Francisco, California

**BUCKEYE WHISTLES**

**Do they hear *You* Coming?**

Buckeye Whistles will clear the way for your apparatus and your officers' cars, many blocks ahead. You can rely upon them, chief, because they are extremely effective and always dependable.

They are made to last a lifetime and are being sold for Fire Department Service exclusively.

A 60-day trial will convince you why almost 400 Fire Chiefs in the United States alone, have recognized in

**BUCKEYE WHISTLES**

*A Warning Signal that Warns*

BUCKEYE IRON & BRASS WORKS ~ DAYTON, OHIO

**Successful Since Sixty-Eight**

**Worcester Fire Alarm Signals**

Long experience in the manufacture of fire alarm signals has given the Worcester whistle a distinction of its own.

It is made to be heard above the din of factory or traffic. Its tone, in no way piercing or unpleasant penetrates to great distances. Operated in conjunction with the electric alarm installations or by steam. Made in four sizes.

We shall be glad to tell you about the Worcester Fire Alarm Signal. Ask for catalog R-60.

**Union Water Meter Co.**

WORCESTER, MASS.

New York Office: 50 Church St.

Phila. Office: 539 Real Estate Trust Bldg.

# FALSE ALARMS

## WHY THERE ARE NOT MORE CONVICTIONS

A young foreign-born was being tried on the charge of setting fire to his little shop in order to get himself out of the way of impending failure. The young district attorney began questioning him:

"Now, Lasky, what do you do?"

"Ven," asked Lasky.

"When you work, of course," said the lawyer.

"I work."

"I know," said the lawyer, "what at?"

"At a bench."

"Ah," groaned the lawyer, "where do you work at a bench?"

"At a factory."

"What kind of a factory?"

"Brick."

"You make bricks."

"No, de factory is made of bricks."

"Now, Lasky, what do you make in that factory?"

"Four dollars a day."

"No, no; what does the factory make?"

"A lot of money, I tink."

"Now listen; what kind of goods does the factory produce?"

"Ah," said Lasky, "good goods."

"I know, but what kind of goods?"

"De best."

"The best of what?"

"De best there is."

"Of what?"

"Of dos goods."

"Your honor," sighed the lawyer, "I give up."

—Youngstown Sheet & Tube Bulletin.

## SOMETHING WRONG SOMEWHERE

"What are those buckets for on the shelf in the back room?" asked the new hardware clerk.

"Can't you read? It says on them 'For Fire Only.'"

"Then why do you put water in them?" demanded the new clerk.

Chief Collins of the ..... fire department thinks he has the dumbest fireman in the country on his force. He submits the following dialogue as proof of his statement:

Captain: "Murphy, go get my boots!

Murphy starts, hesitates, stops—

Captain: "Well?"

Murphy: "Captain did you say to get—both of 'em, or—just one,"

## PATIENCE REWARDED

Fire truck salesman (demonstrating car for Fire Committeeman of village) —Now I will throw in the clutch.

Fire Committeeman—I'll take her then. I knew if I held off long enough you'd give me something for nothing, b'gosh!—Self Starter.

"Why have you a black band around your arm? Who died?"

"Nobody. I burned a little hole there with my cigar."—*Karikaturen* (Oslo.)

He was a member of a Long Island volunteer fire department. for amusement. For a living he specialized in repairing Fords. One night the alarm sounded and the Ford fireman jumped into the first flivver he reached in his shop.

The fire was a "worker," and when it was over, and the apparatus had rolled away, a policeman, recognizing him asked why he was hanging around:

"I'm stuck," was the reply. "I grabbed the first flivver I could reach when the whistle blew and now I'm be darned if I know which one it was, and I've got to hang around until everybody else goes home and take the flivver that's left!"—Howard Pearsall.

Mr. Cohn to his four year old son Jakie, who is outside of his father's tailor shop; "Jakie r-r-r-r-r you playin' wid matches? How many times I told you already if you vant to play wid matches you should come inside—hah?"

When the stove in the home of Mrs. Bernard Short, quarantined for scarlet fever by the Evansville, Ind., authorities, went on strike. she knew that it was impossible to call a plumber or any other workman to adjust the stove. So she tried something else. When firemen asked, "Where's the fire?" she replied, 'There isn't any, and that's the trouble." The stove was fixed.—Boston Globe.

## FIRE ALARM THAT BROUGHT "PROTECTION"

Lester Garvey, a middle-aged man who gave his address as 160 Bleeker street, New York city, and whose intake had been in close contiguity to some reservoir of booze, parked himself against a fire alarm box at Fifth avenue and Fourteenth street, a few day ago. In his endeavor to keep his body from skidding, he clutched the lever and sent in an alarm.

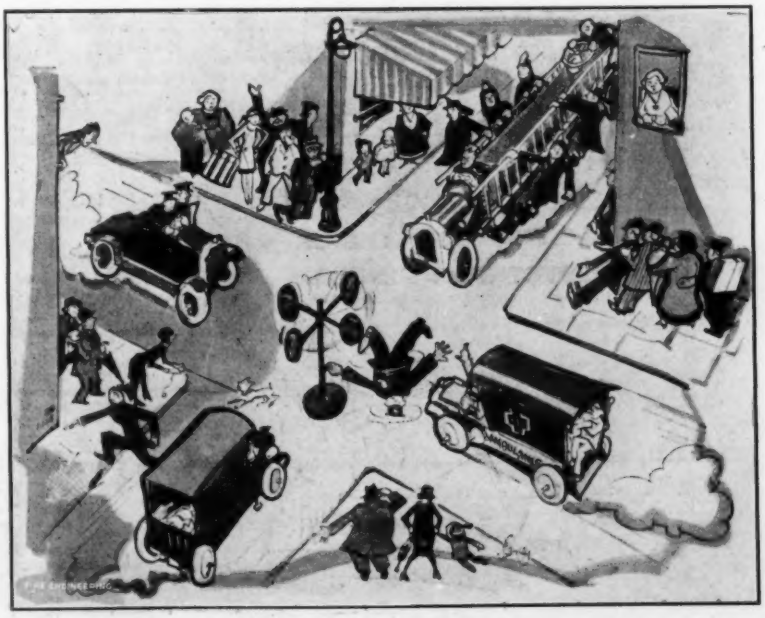
"Where is the fire?" asked patrolman Sullivan.

"No fire," replied Garvey. "I (hic) I want proteshun—I wanner go home." Four fire engines rolled up, followed by two hook and ladder trucks and a water tower. The insurance patrol soon hove in sight, flanked by the emergency crews of the gas and electric companies.

Deputy Fire Chief Henry Helm leaped from his car and accosted Garvey. "Chief," said Garvey, "I wanner go home. Take me home, please." So Policeman Sullivan took him home—to the station house, where Chief Henry Helm entered complaint, and Garvey was given ample time to drain out his tank.

## FIRE APPARATUS MISPLACED —TOWN NEARLY BURNS

Owing to the fire apparatus having been misplaced by the fire department of Ceredo, W. Va., the business portion of that town was nearly destroyed by fire recently. A blaze started in a pool room and spread to adjoining buildings. The only fire apparatus had previously been destroyed, and a truck with 500 feet of hose were purchased and stored in a garage, but the firemen had forgotten where. After an hour's search the apparatus was found. Meanwhile a neighboring department had come to the relief of Ceredo and saved it from destruction.

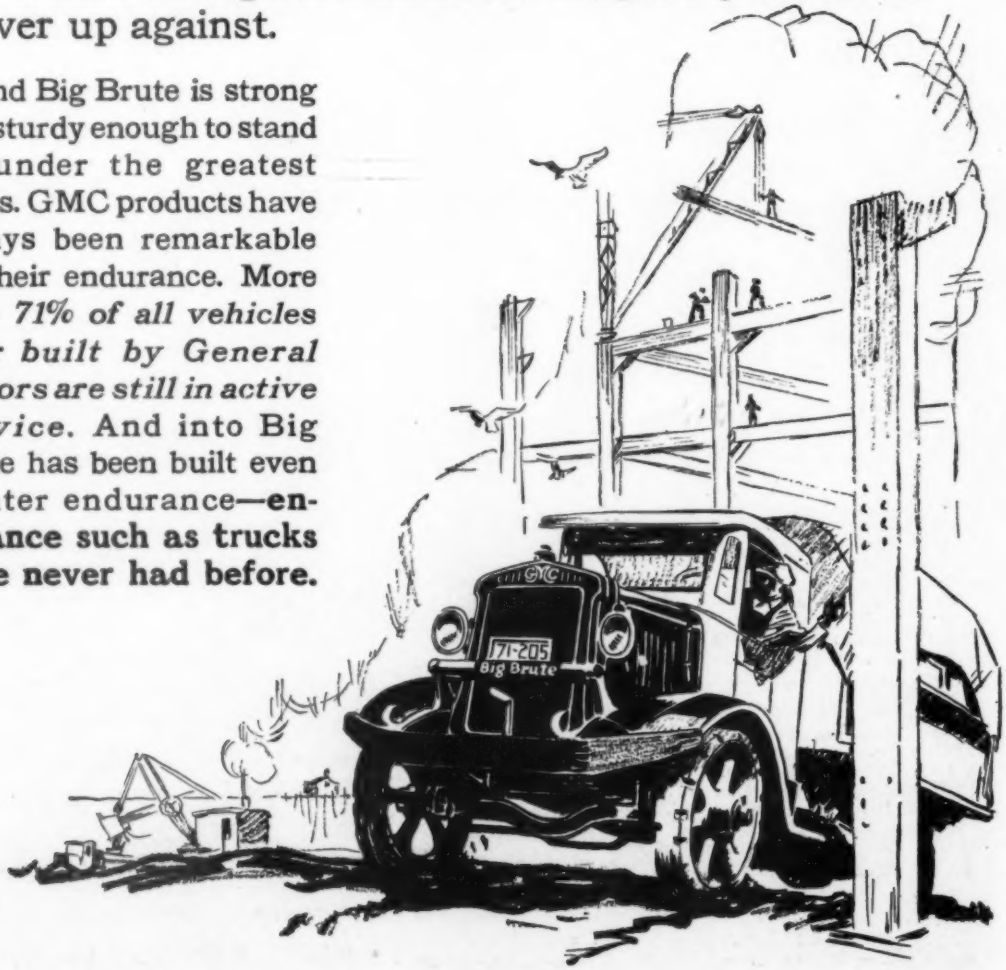


**Traffic Cop Gone Crazy Trying to Decide Who Gets the Right of Way: Mail Truck, Police Car, Fire Engine or Ambulance—*Judge***

# Greater POWER and ENDURANCE in GMC Big Brute

WATCH Big Brute pull a heavy load up a steep hill—watch it plow its way through "heavy going". **Then you will realize its** *greater power.* You can load it to full capacity—*and more*—knowing it is powerful enough to master the toughest job a truck is ever up against.

And Big Brute is strong and sturdy enough to stand up under the greatest stress. GMC products have always been remarkable for their endurance. More than *71% of all vehicles ever built by General Motors are still in active service.* And into Big Brute has been built even greater endurance—**endurance such as trucks have never had before.**



# POWER and ENDURANCE such as trucks have never had before made possible by these features

### 53 Horsepower Engine

An engine powerful enough to master any job a truck is ever up against.

### 2 Range Transmission

Two separate pairs of constant mesh gears give the countershaft two separate speeds. By merely shifting the range lever (which is easily accessible from the drivers seat) the power can be transmitted either through the low super-power range for "heavy going", or through the high driving range for usual requirements.

This two-range transmission —an exclusive GMC feature— *develops 30 per cent more pulling power* than is possible with the same size engine and the usual type of transmission.

This two-range transmission is also an economy feature. It makes it unnecessary to "overpower" the truck, and provides a power transmitting unit which assures **economical operation under any and all conditions.**

### Pressed Steel Frames

The sturdy heat-treated pressed steel frame, with its six cross members and rear end diagonal braces mean greater semi-flexibility and endurance.

### Radius Rods

—relieve the springs of all stress except carrying the load, the driving thrust from the rear wheels being delivered through the radius rods direct to the frame. The radius rods also assure perfect alignment of the rear axle.

### Simpler, Stronger Axles

—built with fewer working parts and great over-strength— the rear axle being a full floating, worm-gear type.

*Products of*

**Yellow Truck and Coach Manufacturing Company**

*subsidiary of General Motors*

GMC Big Brute, 3½ and 5 ton trucks
GMC 1, 1½ and 2½ ton trucks
Yellow Cabs - Yellow Light Delivery Trucks
Yellow Coaches - Hertz Drivurself Cars
GMC 5 to 15 ton Tractors

# A General Motors Product

*Sold and Serviced Everywhere by Branches, Distributors and Dealers of*

**GENERAL MOTORS TRUCK COMPANY, PONTIAC, MICHIGAN**

A DIVISION OF YELLOW TRUCK AND COACH MANUFACTURING COMPANY

## UNIFORMS

Made for FIREMEN, POLICEMEN, BANDSMEN, LETTER CARRIERS, CHAUFFEURS, TAXI or BUS DRIVERS, RAILROADMEN, WAR VETERANS, etc.

CARRIED IN STOCK, IMMEDIATE DELIVERY — or cut and tailored to-measure.

Write for samples and prices.

For Sale by Clothiers.

**FRED M. BATCHELDER CO.**

Manufacturers & Wholesalers,

120 Harrison Ave., Boston, Mass.

# BADGES

*of Every Description*

**QUALITY GUARANTEED**

Right Prices
Prompt Deliveries

We Also Make the Durable

## "ROSS" HELMET

*Our latest catalogue and price list will gladly be sent on request.*

**EVERSON-ROSS CO., INC.**

88 Chambers St., New York

## Do what This Chief Did

A well-known Fire Chief of one of our large cities specified Signal Two Collar Shirt, number 25, for his entire department.

With all the men wearing the same style and kind of shirt the department is now absolutely uniform, and the Chief and his men take pride in their appearance.

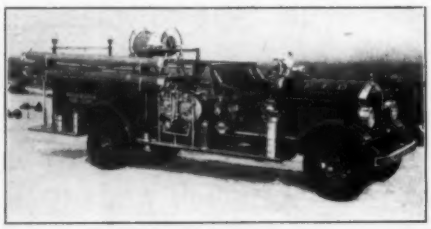
This Signal Shirt is long-wearing, dressy and practical. The two collars save wear and washing.

Signal Shirt Company
Racine, Wisconsin

Signal

*Sanford*

## Fire Apparatus



*All Types and Sizes*

Fire Apparatus Division

**Sanford Motor Truck Co.**

Syracuse, N. Y.

*Builders of Quality Products for 15 Years*

## What's Burning

(*Continued from page 247*)

SMITHFIELD, VA.—Four retail establishments and adjoining property ..... 45
PERTH AMBOY, N. J.—Standard Underground Cable Company 245
NEWPORT, ARK.—Several manufacturing plants and numerous dwellings ..... 995
HADDONFIELD, N. J.—Home of W. S. Fortiner..... 20
WEST NEW YORK, N. J.—Buildings at 12, 14 and 16 Park avenue ..... 25
BEACON, N. Y.—State Theatre and five adjoining apartments 150
WEBSTER, N. Y.—Plant of Webster Herald Corporation..... 15
IOWA CITY, IOWA.—Englert Theater block destroyed..... 95
WEST ALEXANDRIA, O.—Warehouse of S. J. Jaskuleck & Company destroyed ..... 195
NEW CASTLE, PENNA.—Masonic Temple, North street..... 70
CARBON HILL, ALA—Five business buildings destroyed..... 25
HOOPSTON, ILL.—City Building destroyed..... 45
SUNBURG, MINN.—Post office and general store destroyed.... 25
AMSTERDAM, N. Y.—Four business blocks..... 70
NORTH BEND, OREG.—Mill of Stout Lumber Company destroyed ..... 345
ORANGE CITY, IOWA—American Reformed Church..... 20
LEETOWN, KY.—Residence occupied by L. M. Clark, Leetown Pike ..... 20
BOSTON, MASS.—Two warehouses of New England Waste Company destroyed ..... 20
ST. LOUIS, MO.—Building at 908 Sonlard street..... 20
MADISON, WIS.—Stock and fixtures of two State street stores 35
SHINGLEHOUSE, PA.—Six buildings including band and Masonic Lodge ..... 95
HARTFORD, CONN.—Hartford Club, Prospect street ..... 95
NORTH HATFIELD, MASS.—Warehouse destroyed ..... 95
PITTSBURG, PA.—Plant of Hubbard & Company..... 990
SUGARLAND, TEXAS.—Warehouse of Imperial Sugar Company ..... 195
PROVIDENCE, R. I.—Grosvenor Building ..... 200
CHICAGO, ILL.—Western Haircloth Company ..... 45
ROCHESTER, N. Y.—Hudson Suit & Coat Company and adjoining property ..... 25
SCHOHARIE, N. Y.—School building destroyed..... 95
TEXARKANA, ARK.—North Heights District School Building. Residence of Robert Taylor destroyed..... 15
HADDAM, KAN.—Haddam Lumber Yards and South Side Garage 15
LOUISVILLE, KY.—Residence of G. B. VanCleave, Cherokee Park ..... 95
GLENMORE, LA.—Louisiana Sawmill Company..... 245
PICKERING, LA.—Sawmill of W. R. Pickering Company destroyed ..... 245
REVERE, MASS.—Plant of New England Cotton Waste Company 20
BENTON HARBOR, MICH.—First Congregational Church destroyed ..... 145
NORTH ST. LOUIS, MO.—Warehouse of Christmann Veneer Company ..... 15
UTICA, N. Y.—Gennis-Speiller fruit warehouse..... 45
PHILADELPHIA, PA.—Property of T. N. Riesser, Budd street 70
CHANNING, MICH.—Chicago, Milwaukee & St. Paul R. R. shops ..... 145
PORTSMOUTH, N. H.—Maplewood Garage destroyed..... 120
LANCASTER, ONT.—Business district fire..... 45
DALLAS, TEXAS—Andrews building, Main & Akard Streets.. 95
CHARLOTTESVILLE, VA.—J. M. Rothwell residence destroyed 30
SPRINGFIELD, MO.—Five buildings in downtown district.... 245
EAST ST. LOUIS, MO.—Arnold Hotel, Third & Missouri Streets 95
PITTSTON, PA.—East Pittston Coal Company property..... 70
EASTPORT, ME.—Fishery of J. W. Beardsley's Sons destroyed 60
GLOUCESTER, MASS.—Building occupied by W. G. Brown Company ..... 145
SOUTH FALLSBURG, N. Y.—Several buildings destroyed..... 145
OAKLAND, MD.—Garage of Louis Waingold..... 15
NORTHVILLE, MICH.—Schrader Brothers garage, Main Street 55
BRIGHTON, MICH.—Brighton Inn destroyed..... 15
TIFFIN, OHIO—Home of Ralph W. Glick, east of this place.... 15
CLYMER, PENNA.—Building of Clymer Baking Company.... 15
CHATTANOOGA, TENN.—Union Bank Building, Georgia Avenue 20
JESSUP, GA.—Plant of Jessup Sentinel destroyed..... 20
COVINGTON, GA.—First Presbyterian Church destroyed..... 30
CHELSEA, MASS.—Plant of O. K. Shank Company..... 20
NORTH BERGEN, N. J.—Residence of Frank Castellano destroyed ..... 20
CHEYENNE, WYO.—A hangar at the U. S. Air Mail Field.... 55
E. LIVERPOOL, O.—Sulkes Brothers Store and adjoining property ..... 100
KEESVILLE, N. Y.—St. John the Baptist Church..... 95
PORT VUE, PA.—McKeesport Tin Plate Company..... 245

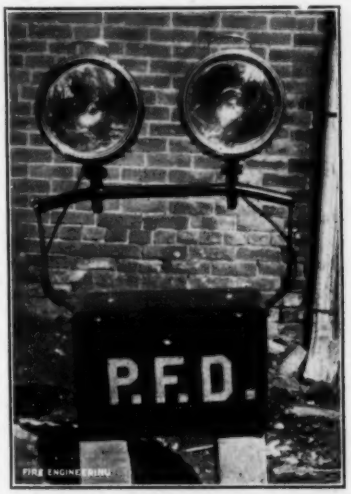
## Fireman Electrocuted at Bluefield, W. Va.

S. W. Davidson, member of Station No. 1, of the Bluefield, W. Va., fire department, was instantly killed recently, when he came in contact with a wire charged with 2,300 volts. The tragedy occurred while he was engaged with other firemen fighting a fire in a private dwelling. Mr. Davidson leaves a widow and two children.

**Coal Substitutes make Busy Month for Philadelphia**—Chief Ross B. Davis of Philadelphia, Pa., blames the misuse of coal substitutes for the 957 increased calls during the month of January—the busiest month in the history of the department. Most of the damage was caused by the formation of explosive gases which ignited in the flues. In addition, 129 false alarms were sent in.

## South Dakota Chief Devises Unique Light

Periodically there comes to the notice of FIRE ENGINEERING new devices for fire department use, many of which add to the utilities indispensible to efficient workmanship. One of the latest accessories in fire fighting to which attention has been directed, is what may be called a duplex swivel search light. It is the creation of Charles Zumwalt, assistant chief of the fire department at Pierre, South Dakota.

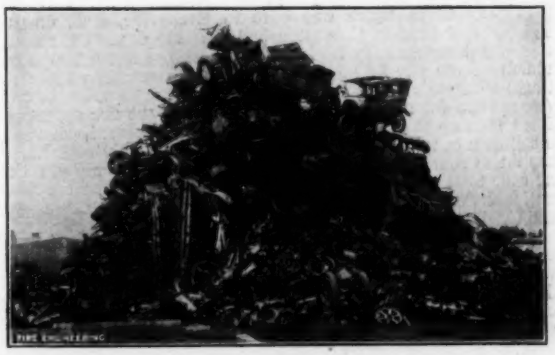



**Duplex Swivel Searchlight Devised by Assistant Chief of Pierre, S. Dak. Two Lights are Mounted with Swivel Connections so That They May Be Turned in any Direction, and Tipped Up and Down as Well**

The device is a valuable acquisition in penetrating darkness, and furnishes the foundation for the development of an extremely useful adjunct in fire fighting. Readers of FIRE ENGINEERING can get some idea of the device from the accompanying illustration.

Chief Zumwalt has taken two drumhead automobile headlights and put thirty-two watts bulbs inside. These have been mounted over a battery box containing a six-volt standard storage battery. These lights are so adjusted that they can be turned in any direction—up and down, right and left, with perfect ease, and focused upon any object desired, both together or singly.

Experimental tests have been made with the new device, and on the darkest, rainy night, Chief Zumwalt has been able to throw its penetrating rays more than five blocks, illuminating everything within its scope. From the standpoint of local use, the invention promises to be of great value to the Pierre Fire Department.



**These Old "Boats" Will Make Big Bonfire**

They have served their day and have been the family pride, but now they are to return to the original metal, and the parts composed of other materials must first be burned away. Hence the big pile ready for the bonfire at Salt Lake City, Utah.

**Educational Drive at Huntington, W. Va.**—All employers of labor at Huntington, W. Va., have been asked to set aside ten minutes each week for the instruction of employes in safety and hazards. Fire connections are also to be standardized.

**Chief Rosar, of Scranton, Urges Apparatus Purchase**—Chief Peter J. Rosar of Scranton, Pa., is urging the city officials to purchase fire apparatus to replace several pieces of apparatus which are out of service and beyond repair. It is possible that moneys appropriated for street paving will be diverted to the fire department.

## CONVENTION DATES

March 26—NATIONAL FIRE WASTE COUNCIL. Spring Meeting, at headquarters, Chamber of Commerce of the United States, Washington, D. C., at 10 a. m.

March 30-31—FLORIDA STATE FIREMEN'S ASSOCIATION. Annual Convention, Palatka, Fla. Secretary, Chief F. C. Pfaender, Winter Haven, Fla.

April 1—INDIANA FIREMEN'S ASSOCIATION, Directors' Meeting to set date of Annual Convention, Marion, Ind. Secretary, Frank H. Miller, Fire Headquarters, Terre Haute, Ind.

May 10-13—NATIONAL FIRE PROTECTION ASSOCIATION (International). 30th Annual Meeting, Atlantic City, N. J. Secretary, Franklin H. Wentworth, 40 Central St., Boston, Mass.

June 8-10—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 37th Annual Convention, Port Jervis, N. Y. Secretary, Chief Chris W. Noll, Fire Department, Poughkeepsie, N. Y.

June 9-11—MARYLAND STATE FIREMEN'S ASSOCIATION. 34th Annual Convention, Westminster, Md. Secretary, George R. Lindsay, Hagerstown, Md.

June 10-12—ARIZONA STATE FIREMEN'S ASSOCIATION. 3rd Annual Convention, Prescott, Arizona. Secretary-Treasurer, Chief W. J. Nemeck, Douglas, Ariz.

June 22-24—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS—Fourth Annual Convention, Hotel Carpenter, Corner Merrimack and Franklin Sts., Manchester, N. H. Exhibit Hall, New Watertown, Mass. Chairman, Exhibit Com., Chief Henry H. Heitman, Waterbury, Conn.

July 14—DELAWARE STATE VOLUNTEER FIREMEN'S ASSOCIATION. 6th Annual Convention, New Castle, New Castle County, Del. Secretary, Sam H. Carson, Dover. President, Geo. Clifton Maull, Lewes.

July 21-22—CENTRAL NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 33rd Annual Convention and Parade, Endicott, N. Y. Secretary, Millwood Fitch, Moravia, N. Y. Secretary, Local Committee, Floyd L. Jackson, Endicott.

July 27-28—WESTERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Kenmore, N. Y. Secretary, Henry A. Clark. 21 Porter Ave., Batavia, N. Y.

Aug. 17-19—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. 55th Annual Convention, Alexandria Bay, N. Y. Secretary, Fred A. Davis, Fort Edward, N. Y.

Sept.—KANSAS FIRE CHIEFS AND FIREMEN'S ASSOCIATION. Tentative Month of Annual Conventions, at Manhattan, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Sept. 14-15—IOWA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Manning, Ia. Secretary, E. E. Parsons, Marion.

Sept. 27-29—ARKANSAS STATE FIREMEN'S ASSOCIATION. Annual Convention, Jonesboro, Ark. Date of meeting tentative. H. S. Compton, secretary. Central Fire Station, Little Rock, Ark.

Oct. 5-7—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual Convention, Philadelphia, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 19-22—INTERNATIONAL ASSOCIATION OF FIRE ENGINEERS. 54th Annual Convention, Hotel Roosevelt, New Orleans, La. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.

## Chief J. W. Risch, Crookston, Minn., Dies

J. W. Risch, chief of the Crookston, Minn., fire department, died in that city on February 24, following an operation two weeks previous. Chief Risch was born in Evansville, Ind., on July 6, 1871, and went to Crookston in 1888. He entered the volunteer fire department in 1895; he served as fire marshal and custodian of the city hall for 18 years; was treasurer of the National Firemen's Association, and the local fire department relief Association for nine years; and was chief of the fire department from 1918 up to the time of his death. The deceased was recognized as a conscientious public servant, being highly respected by the men under him and by citizens generally. The only vacations he ever took was when he attended the conventions of the International Association of Fire Engineers. The high standing of the Crookston fire department is due to his supervision, he having seen it grow from a small volunteer organization to a motorized body of high efficiency. As indication of the high esteem in which he was held, all business houses closed their doors on the day of his funeral, which was attended by many civic bodies and city organizations. Chief Risch is survived by a widow, two sons and two daughters. His eldest son is a member of the Crookston fire department.

**McCook, Neb., Fire Hazard**—A fire prevention committee has condemned nine buildings in McCook, Neb., and ordered them removed as a menace to adjoining structures.

**Elsinore, Cal., Has New Pumper**—The village of Elsinore, Cal., has recently purchased an American-LaFrance, 400-gallon triple combination pumper. Tom Boyle is the chief.

**Semi-Paid Department for Collingswood, N. J.**—The village of Collingswood, N. J., is to take over the fire apparatus of the old volunteer fire company, and create a part paid department. The volunteers will aid the paid men when required.

**Islip, L. I., to Absorb Neighbor Departments**—A movement is on foot looking to the consolidation of the fire departments of Islip and Great River, L. I., under Chief Ted Newman. New apparatus will be bought.

## PROPOSED IMPROVEMENTS

**Davenport, Scott Co., Iowa.**—Chief Denger to recommend purchase of 1,000-gal. pumper.

**Lake Crystal, Blue Earth Co., Minn.**—City considering purchase of fire apparatus.

**Syracuse, Otoe Co., Nebr.**—Chief instructed to obtain prices on shut-off and spray nozzles and smoke protectors.

**Frankfort, Herkimer Co., N. Y.**—Village board considering purchase of fire apparatus.

**Turlock, Stanislaus Co., Cal.**—City clerk instructed to invite bids for furnishing a city service truck estimated to cost $13,000.

**Brawley, Imperial Co., Cal.**—Chief Hutchinson recommended installation of additional fire alarm boxes so that one will be on every corner in business section.

**Burbank, Los Angeles Co., Cal.**—At spring election, city will consider $75,000 bond issue to provide for two new fire stations and equipment.

**South Bend, St. Joseph Co., Ind.**—Mayor Brady advocating purchase of fire apparatus. City to advertise for bids soon.

**Tilghman, Talbot Co., Md.**—Fire company organized with Harry R. Howeth, president and G. Frank Jackson, chief.

**Verona, Gogebic Co., Mich.**—New fire station may be constructed on opposite side of railroad tracks to prevent delay to fires.

**Minneapolis, Minn.**—Second commission appointed to appraise property in Loop district for construction of fire station.

**Missoula, Missoula Co., Mont.**—City again considering fire equipment.

**Newport, Rock Co., Nebr.**—Fire department organized.

**Melrose (Mail Medford) Burlington Co., N. J.**—Town to have new fire station constructed.

**Athens, Greene Co., N. Y.**—Considering purchase of fire apparatus.

**Bellefonte, Center Co., Pa.**—City considering type of fire alarm system most suitable for city.

**Erie, Erie Co., Pa.**—City agrees to construct new fire station.

**Roseburg, Douglas Co., Ore.**—Suggestions made that city install a fire alarm system approved by the National Board of Fire Underwriters and a sufficient number of non-interfering boxes.

**York, York Co., Pa.**—Council discusses need of new apparatus for Liberty Fire Company.

**Trevorton, Northumberland Co., Pa.**—Considering installation of electric fire siren with number of fire alarm boxes.

**Mt. Pleasant, Westmoreland, Co., Pa.**—Drive under way to raise money for purchase of fire apparatus.

**Caledonia, Houston Co., Minn.**—Bids will be received by Village Council until March 23, for one electric fire siren, approximately 5 h.p., 3 phase alternating current with automatic tone control, and two remote control station switches; all F. O. B. Caledonia, Minn., and subject to 30 days' trial. L. L. Duxbury, Village President.

**Glen Cove, Nassau Co., N. Y.**—Fire Commissioner Murray recommended that a new pumper and fire siren be purchased. Money for both these expenditures have been provided.

**Palmyra, Burlington Co., N. J.**—Following large fire this place to purchase hook and ladder truck. James T. Weart, Mayor.

**Birmingham, Ala.**—On April 15, to vote on $300,000 bond issue for new fire stations and equipment.


**For Sale**
**Triple Combination**

American-LaFrance model. Rated capacity, 750 gallons. Address Box 116, FIRE ENGINEERING, 225 West 34th St., New York City, N. Y. 2-10, 3-10, 3-25

**Salesmanager Wanted**
**Permanent Position**

To promote our line of fire alarm and watchmen systems, hold-up alarm signals for banks and paymasters, automatic telephone calls, etc., we need an experienced man to manage office and build up a national sales organization.
Splendid opportunity for the right man. If forward-looking and more interested in a successful future than size of present salary, write fully, giving present employment and experience.
Your letter will be held in strict confidence.
McFell Electric Devices Co.
347 St. Johns Ct., Chicago, Ill.
3-10


### Proposals for Hook and Ladder Truck

BOONTON, N. J.

Bids opened April 5, 1926.

Bids for a motorized Hook and Ladder Truck to be received by the Town of Boonton, N. J., on March 15, 1926, are withdrawn and bids are requested as follows:

Sealed bids will be received by the Mayor and Board of Aldermen of the Town of Boonton, New Jersey, on Monday, April 5, 1926, at 8.30 p. m. at the Town Hall, Boonton, N. J., for the purchase of a motorized Hook and Ladder Truck to the following specifications:

Motor: To develop not less than 75 H. P.
Tires: All pneumatic.
Ladders:
1—45 ft. or 50 ft. extension, truss type.
1—35 ft. or 40 ft. extension, truss type.
1—25 ft. or 30 ft. extension, truss type.
Wall Ladders:
1—22 ft. truss type.
1—20 ft. truss type.
1—18 ft. truss type.
Roof Ladders:
1—16 ft.
1—14 ft.
1—12 ft.
Miscellaneous Equipment: Of a standard to make this a first class Hook and Ladder job.

Certified check for 5% of the bid to accompany each bid.

Proposals should be addressed to Albert P. Smith, Town Clerk, and enclosed in a sealed envelope marked on the outside "Proposal for Hook and Ladder Trucks."

The Mayor and Board of Aldermen reserve the right to reject any or all bids.

ALBERT P. SMITH,
Town Clerk.

March 2, 1926.
3-10

*Always Ready for Instant Use*

*FOR PERSONAL SAFETY USE*

DONTFEAR

*SMOKE and FUME RESPIRATOR*

Positive Protection

Against Smoke and Smoke Gases

No Sponge. Price $5. With Airtight Goggles $5.60

**Gibbs-Wahlert Mask Co.**

388 Jay St., Opp. Fire H'q'trs. Brooklyn, N.Y.

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**Motor Fire Apparatus** Mounted on **Standard Type Chassis**

*Send for descriptive circular.*

**AMERICAN FIRE EQUIPMENT CO.**

9 Broad St., Boston, Mass.

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# MORSE

**FIRE BOAT EQUIPMENT**

Invincible and Callahan Nozzles

**Fire Department Supplies**

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

**Andrew J. Morse & Son, Inc.**

221 High St. Established 1837 Boston, Mass.

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# The "Fyre-Foe" Twin Pumper

***for Fords***

provides adequate fire protection at a fraction of the cost of big apparatus, and is ideal for small towns and communities.

**Send for complete details.**

**Jaeger Portable Power Corp.**

Woodbridge at Rivard, Detroit, Mich.

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# LARKIN Shut-off Nozzles

**Over 2000 Fire Departments**

have 15,000 Larkin Shut-off Nozzles in service. They have a successful record that is not exceeded by any article used in the fire service. Specify and insist upon them in buying new apparatus.

*Write for catalog*

**The LARKIN Mfg. Co.**

Dayton, Ohio

*High Grade Fire Dept. Supplies of All Kinds*

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# Novo Acid Jars & Holders

*of every description, stronger than lead and none-corrosive. Used by departments throughout the country.*

**Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks**

Lally Improved Fire Hose Couplings, Fire Extinguishers and Charges, Fire Hose and Fire Department Supplies in General

***Send for Complete Catalog***

**LALLY FIRE APPLIANCE CO.**

Wilmington Brass Co., Wilmington, Del.

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# The STOUGHTON

**Community Fire Fighter is Designed Especially for Small Towns**

Fire apparatus for volunteer and small town fire departments must be designed, built and equipped to meet particular requirements. It must be a combination of several distinct types built for city use. It must be complete in every detail.

The Stoughton, the *Original Community Fire Fighter,* is designed to meet these requirements and made in three sizes,—300—350 and 500 gallon capacities. Each model and every piece of apparatus guaranteed to pass the National Board of Fire Underwriters' twelve-hour pumping tests.

*May We Send Complete Information?*

**STOUGHTON WAGON COMPANY**

**FIRE EQUIPMENT DIVISION, STOUGHTON, WIS.**

STOUGHTON FIRE APPARATUS CO., 230 W. 57th St., New York City, Eastern Representatives

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# HAHN

**Motor Fire Apparatus**

Write for literature and prices on our 250, 350, 500 and 750-gallon triple combinations, chemical and hose combinations and city service trucks.

**Hahn Motor Truck Co.,**

Hamburg, Pa.

## CLIFTON SALVAGE COVERS

*have all the good points.*

- *The most convenient size—12 x 18 feet*
- *The right weight—About 38 pounds*
- *Strong, heavy duck and lapped seams*
- *An absolutely waterproof double coating of a high grade, long life, rubber compound*

*Many large Protective Departments use them*

*Send for our circular*

**CLIFTON MFG. CO.**

Jamaica Plant District — Boston, Mass.

## C. G. BRAXMAR CO.

**242 W. 55th ST., New York City**

MORE THAN 900 DESIGNS

Every Fire and Police Department should have our latest catalog illustrating Braxmar Badges—the recognized standard since 1879—Gold Filled, Silver, Gold Plate, Nickel, etc.

## BADGES

*Ask For Catalog*

## The Schavoir Gas Mask

The latest and most advanced development in gas masks. Fire officials everywhere should get the facts.

*Write for Complete Information*

**Schavoir Rubber Co.** Stamford, Conn.

## Compressed Air Fire Whistles, Fire Alarm Boxes, Gongs, Etc.

**Complete Systems Installed**

***Estimates Cheerfully Given***

**LOPER FIRE ALARM COMPANY**

Stonington, Conn.

## Save Money for Your Fire Department

BY PURCHASING YOUR

**FIRE DEPARTMENT SUPPLIES**

FROM

**Schwartz Bros., 110 North 8th St., Phila., Pa.**

WRITE US FOR OUR SPECIAL PRICES

**Our 18 Years' Experience in this business enables us to give you the best at the lowest prices**

Quick-Acting Reliable

Anderson-Hale Improved

## FIRE STATION DOOR OPENERS

Over 1,300 sets of Anderson-Hale Fire Station Door Openers are in successful use. They provide simple, durable, quick-acting doors that open inward. No obstruction to sidewalk. Attractive in appearance, cannot sag, closes tight, excludes cold, gives clear opening. Opens from driver's seat or from floor. Many repeat orders from users.

*Write for complete information.*

**The Anderson Coupling & Fire Supply Co.**

*Mfrs. Motor Fire Equipment and Fire Supplies*

Kansas City, Kansas

**The Perfect Satisfaction and economy of wearing the**

***"FAMOUS KALAMAZOO"***

Firemen's Uniforms has been proven by thousands of firemen. Catalog F501 will tell you all about them.

**The HENDERSON-AMES CO.**

KALAMAZOO, MICH.

Waterous Dependable

## ROTARY PUMPS FIRE HYDRANTS

**Agencies in Principal Cities**

***Send for our Complete Catalog***

**WATEROUS FIRE ENGINE WORKS**

INCORPORATED

St. Paul, Minnesota

## Utilizing Boy Scouts in Fire Protection

(*Continued from page 232*)

ordinances. Valuable service was rendered to the regular department in giving first aid, carrying messages, directing traffic, fighting brush fires and helping the Women's Auxiliary by serving hot coffee and sandwiches to victims of fire, and exhausted fire fighters during fires.

### WEEK'S BEST GOOD TURN

The fast and heroic work of Scouts Russell Norton and William Grover, of Bristol, Conn., recently saved four buildings from destruction by fire.

The boys were homeward bound from a fourteen-mile hike when they saw a cloud of smoke through a tangle of trees. Realizing that Shady Dell, a picnic resort, was close by and knowing it to be tenantless, they raced toward the telltale sign. Two of the buildings were already ablaze. The door of one of them stood open. Peering through a window, the rescuing party of two saw a sleeping man stretched out on a bunk. Unable to waken him, the small but plucky workers were dragging the heavy form across the floor when a fit of coughing caused by the heavy smoke, woke the man. All three then fell to. They "rustled" a ladder, formed a bucket brigade, and after an hour's hard fighting put out the flames.

As the conflagration occurred ten miles from a telephone, there was no way of summoning the local fire department.

### FIREPROOF CITY, THEIR GOAL

#### Survey of Fire Hazards by Boy Scouts of Jefferson City, Mo., Proves Effective Civic Good Turn with Far-Reaching Results

In Jefferson City, Mo., the Scout slogan is "Make our city fireproof." During Fire Prevention Week a group of these civic-minded boys made a survey of fire hazards in the business section. Qualified firemanship merit badge holders were chosen for the work. The local Fire Chief took the boys first on a short tour of instruction, in which they learned exactly what constituted a fire hazard. Then each lad was given a district to inspect. They reported eighteen business houses needing immediate attention. Letters were despatched by local Scout executives to owners of these buildings telling them of the need for reduction of the fire hazards. The following Saturday the boys checked up on results. This work caused much favorable comment and a local insurance man said every business house cooperating would be reported on favorably to fire inspectors, which would result, no doubt, in decreasing the insurance rates.

#### Knowledge of First Aid a Necessity

In a mid western city there was a dwelling fire, and one victim was asphixiated by a broken gas connection. He was brought out and a doctor was sent for. In the meantime a Scout in the crowd tried to administer artificial respiration. All Scouts are required to know the Shaefer method in passing their First Class Tests.

The crowd pushed him out of the way because he was a "kid," and they stood around and let the man die. Doctors said that a prompt attempt at artificial respiration would probably have saved his life.

In a Connecticut city a man and a woman were overcome by gas. There was considerable delay in getting the ambulance, and in the meantime there was nothing that could be done. The two patients were pronounced living when the ambulance arrived, but died before they reached the hospital. There were no Scouts in the group that found them.

In New York State a policeman made a heroic rescue of a woman who was trying to drown herself. Then he hung her limp body over a wall in an attempt to get the water out of her lungs. She died before the ambulance arrived. It pays to know what to do.

#### Scouting Aims at Better Citizenship and Training

Scouting is a program for boys, aimed at better citizenship. It aims to train boys to act in an emergency, and to live up to the Scout Law and Oath:

#### THE SCOUT OATH

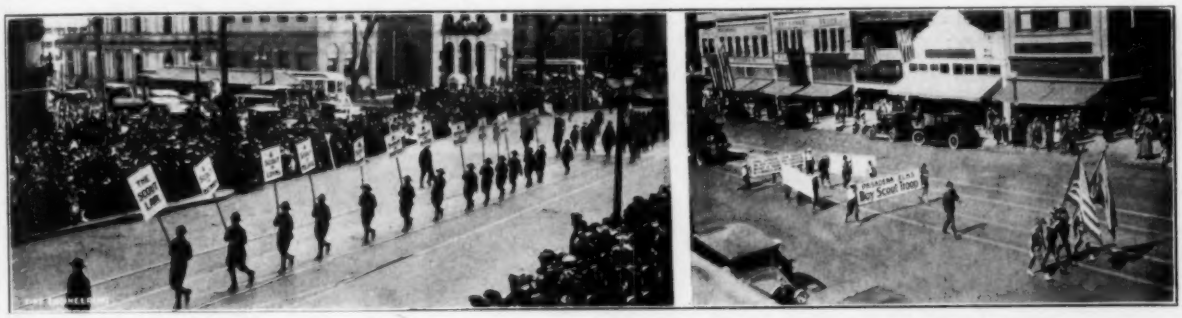
*On My Honor I Will Do My Best*

1. To do my duty to God and my Country, and to obey the Scout Law;
2. To help other people at all times;
3. To keep myself physically strong, mentally awake and morally straight.

#### THE SCOUT LAW

1. A Scout is Trustworthy
2. A Scout is Loyal
3. A Scout is Helpful
4. A Scout is Friendly
5. A Scout is Courteous
6. A Scout is Kind
7. A Scout is Obedient
8. A Scout is Cheerful
9. A Scout is Thrifty
10. A Scout is Brave
11. A Scout is Clean
12. A Scout is Reverent

We all believe in the Scout movement, and feel sure that if we ourselves lived up to this Scout Law and Oath, it might be better for us and for the world.



Left, Part of Hartford, Conn., Section of Boy Scouts in Safety Parade. Right, Pasadena Boy Scouts in Fire Prevention Day Parade.

## Kenlon Submits Practical Traffic Plan

(*Continued from page 234*)

the meantime the nearest fixed post policeman to the call has been telephoned and sent to the place where the call originated. On receipt of the assignment number policemen consult their assignment book and certain ones designated in the book to do so respond to the fixed post. The policeman at this fixed post has written on the slate in his booth the location of the call and the responding policemen hasten there. Traffic is now being controlled automatically at the posts left vacant by responding policemen. This system has the benefit that the policeman who is first due at the call knows he will shortly have help at hand.

#### Costs

In a study of this kind it is not possible, of course, to accurately determine costs to the nearest dollar. But from data available as the result of numerous fire alarm contracts and figures furnished by manufacturers of signal lights, it is estimated that the cost of the installation suggested herein would approximate $500,000.

This is based on the installation of 329 fixed posts consisting of a fire alarm box, a police telephone, a police telegraph panel mounting a telegraph key, tapper, bell, sounder, and test switches and a combination manual and automatic traffic controller, all set in a sentinel box type of shelter equipped with an electric heater unit, a desk shelf, and having provisions for the storage of the policeman's raincoat and boots.

There need be no cost in connection with the installation of the fire alarm box as the sentinel box shelter will be alongside the fire alarm post to facilitate connection with the fire alarm cable plant wires it is proposed to use. Similarly a number of police signal telephone boxes occur at the same intersection and the only cost will be the removal cost in this case. The main item of expense is the cost of the shelter and the traffic signal unit.

The traffic unit considered is the pedestal type for a 4-way signal and is electrically lighted and controlled.

Considerable of the expense of the installation, in fact practically one-third could be eliminated, if a one-light traffic unit having 4 lenses, 2 green and 2 red, and a semaphore in combination was installed on a mast-arm and the illumination furnished by a self-contained, kerosene-gas lamp similar to those used in marine and railroad work with provisions by means of a mechanical device for turning the signal unit to control traffic. If the policeman had to leave his post he could set the semaphore and the light to indicate the free movement of traffic in all directions.

There would be certain fixed charges in connection with the furnishing of electricity to light and heat the fixed post facilities and also for the telephone. The telephone cost is already carried in the budget and the cost of supplying electricty could be included in the street lighting contracts and the pro-rata expense charged to the police department thereby securing the benefit of quantity purchasing. Some of the present traffic signal lights are maintained at a cost of $48 a year.

### Conclusions

Under the premises advanced it is apparent that the initial cost of the fixed post proposition is less than the average annual salary paid 300 policemen. The maintenance cost also shows a greater saving using the same comparison.

The fire department credits much of its efficiency to its ability to instantly communicate with every branch of the service over its signalling system. Any man on duty in the fire department can be reached in less than 2 minutes. The location of every fire company is always known. The movement of the entire force is under constant surveillance. This system keeps the men on their toes and promotes efficient operation.

It is felt that the advantages that would accrue to the police department by the installation of a signaling system and fixed post such as proposed would more than offset by many-fold the services of 300 policemen as conditions now are.

The ability to instantly communicate with 329 policemen scattered at strategic points throughout the borough and to control by means of a prearranged assignment or plan of action the movements of 3 or 4 times that number of men will not only result in a speeding up of police service, but because the men know they are under constant surveillance and may be called at any moment it will result in a constant endeavor on their part to be on the job.

While this study was primarily instituted in a desire to promote fire department efficiency the plan as it developed has unfolded a way whereby the police department can be assisted in its very difficult work by a proper use of certain facilities available in the fire department.

The whole proposition has been brought to your attention in an unselfish desire to aid and I believe enough practical advantages have been disclosed to warrant the development of a detailed plan.

Respectfully submitted,
JOHN KENLON,
Chief, New York Fire Department

## Report of Dayton, O., Fire Department

In his annual report of the Dayton, O., fire department, the chief says there are 208 men, and the annual pay roll amounts to $331,155. The fire waste reached $235,820; per capita loss based on a population of 185,000 was $1.27. The department responded to 1,431 alarms, 43 of which were false. No conflagrations occurred. Chief Ramby is in charge of the department.

## Connecticut's Smallest Fireman

The village of Noank, Conn., claims to have the smallest fireman in that state. He is Charles Emmet Ellis, four feet, one inch tall, and eighteen years old. For many years he was the company's mascot, attending all musters, parades and taking part in all the festivities of the organization. But more recently he has been made a full-fledged fireman, wearing a regulation uniform and attending all fires.

**Old Hose Company Has Anniversary**—The William Penn Hose Co., of Philadelphia, has just celebrated its ninety-sixth anniversary. Its present membership is 400, with thirty-two on the active list.

**New Type of Cars for Chicago Chiefs**—Chief Seyferlich and Deputy Chief McAuliffe of the Chicago fire department, are each to have a new private car. They are to be of a new type. Instead of the usual touring car, they are to be enclosed.

## WOMEN LOSE THEIR HEADS AT FIRES, SAYS CHIEF JOHN B. KENNEDY

**Fairer Sex Seldom Remain Cool When House Is In Flames—Few Men Let Nerves Get Best of Them**

"THE burnt child dreads the fire," said Chief John B. Kennedy, of the Augusta, Ga., fire department, "and so do all women," he continued in an interview with me recently. Chief Kennedy, the hale and hearty director of the Augusta fire department, has noted that women become more frantic than men during a fire scare.

"Women lose their heads and become uncontrolable at such times; they seem unable to speak intelligently, and thinking only of the danger they are in, make a wild rush for safety. Of course, none of us want to get injured, but most men keep their heads, realizing that there may be others who are in danger as well as themselves, and often perform acts of heroism in their attempts to rescue the other fellow. Why, only a few days ago when a small fire broke out in the General Office Building of the Georgia Railroad, we had great difficulty in climbing the stairs on account of the mad rush of the women coming down. I had hard work to keep from being knocked down the moment I entered the stairway.

"The men clerks, on the contrary, when they discovered trouble, coolly set about to find the flames by tracing the source of the smoke. Some made their way to the exits in an orderly manner. Not one of them clogged the stairway when they saw us trying to ascend. That is typical of the two sexes as I have always found it," said Chief Kennedy.

"I was told a few days ago," continued the chief, "that a western newspaper printed a statement that women were more courageous during a fire than men. Well, I don't want to hurt the feelings of the ladies, but I simply do not believe it. It does not seem reasonable to begin with. It's not expected that women should show the nerve and bravery that men do. They are differently constituted; their nerves are always higher strung than those of men."

Chief Kennedy called attention to the difference between men and women when sending in an alarm by telephone. "When a women calls us over the phone," saaid he, "she screams out something that sounds like this: 'This is Mr. John Doe's house. It's on fire; come quick!' Up bangs the receiver, and we are left with no directions other than the house-owner's name. And yet they wonder why the fire department does not respond more promptly, having given us this valuable (?) information."

"Here is how a man would send in a telephone alarm: 'Fire headquarters? The house at 5678 Which street, is on fire. Five-six-seven-eight, Which street.' Then we have something definite to work on, and usually accomplish the extinguishment of the fire, because we make a quick response. No siree, women are not cooler than men under such circumstances, and he who says so has not had much experience in handling a fire where women are present."

JOHN A. STULB.

## Killed by Fire Engine Driven by Son

Thomas C. Elvins, former Mayor of the city of Hammonton, N. J., was so badly hurt on January 24 by a fire engine driven by his son that he later died from his injuries. The injured man was taken to the Jefferson hospital in Philadelphia, where one of his legs was amputated. Both father and son were members of the volunteer fire department at Hammonton, and were leaving the fire engine house in response to an alarm, with the son at the wheel, when the father fell from the running board, the rear wheel of the heavy apparatus passing over his left leg. Mr. Elvins, who was 58 years old, had been mayor of Hammonton for six years, and before that he had been a member of the State Assembly for six years, and has served as postmaster for eight years.

## Panama Firemen Celebrate Independence

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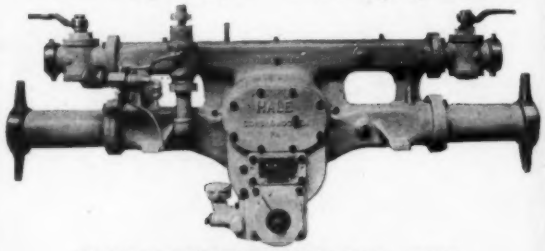

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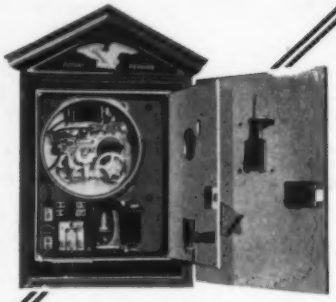

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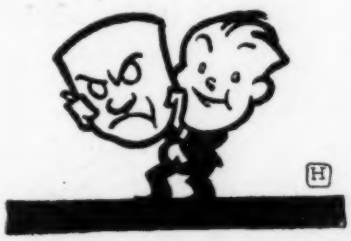

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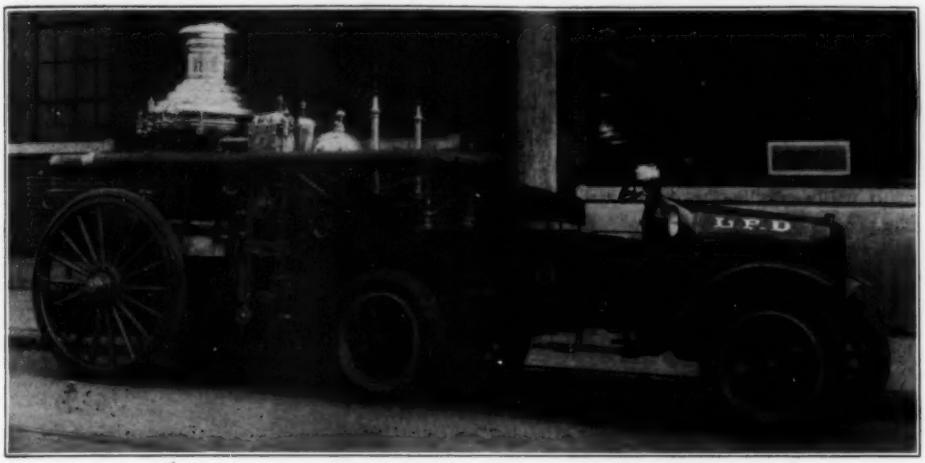


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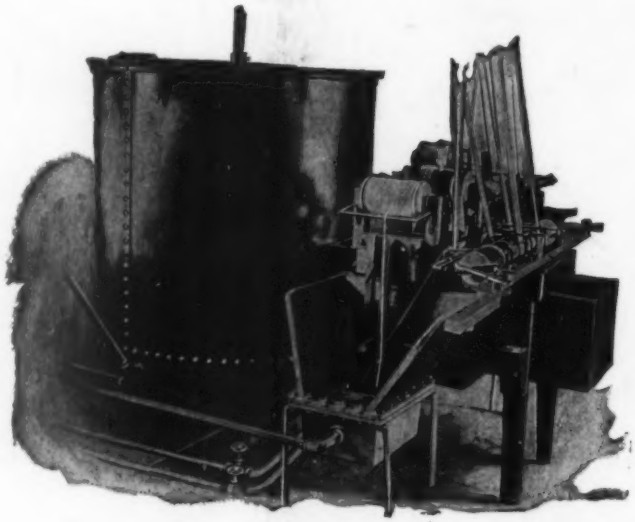

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